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Army Acquisition Officer Educational Path Optimization

December 2018

MAJ Michael Carroll, USA

MAJ Kevin Hicks, USA

Thesis Advisors: Dr. Robert Mortlock, Professor
Raymond Jones, Professor

Graduate School of Business & Public Policy

Naval Postgraduate School

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ABSTRACT

This project will study the acquisition educational path for Army MOS 51 series program management and contracting officers to identify the optimized professional and military pathway to produce qualified Program Managers and Contracting Officers. Using qualitative research in the form of multiple case studies as a research design, this project will focus on the value of merging the acquisition foundation course (AFC) and intermediate level education (ILE) with an accredited professional education program to produce the most qualified Acquisition Officer. This study advances the level of insight into these issues and establishes the foundation for future research.



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ABOUT THE AUTHORS

MAJ Michael Carroll was commissioned as a Transportation Officer upon graduation from Michigan Technological University in 2006. Prior to his commission, he served as an enlisted soldier and achieved the rank of Specialist as a Heavy Vehicle Operator and Bridge Crewmember Boat Operator. MAJ Carroll's operational assignments include Platoon Leader and Executive Officer of the 66th Forward Support Company (FSC), 3-13th Field Artillery Regiment (Multiple Launch Rocket System); Bulk Petroleum and Water Officer, 10th Sustainment Brigade; FSC Command, 7th Engineer Battalion (Route Clearance). MAJ Carroll's combat tours include Camp Cedar, Iraq 2003, Camp Bucca, Iraq in 2008-2009 and Forward Operating Base Shank, Afghanistan 2011-2012. MAJ Carroll then transitioned to the Army Acquisition Corps in 2013. MAJ Carroll's acquisition assignments include Assistant Product Manager - Heavy Tactical Vehicles (HTV), and Product Integrator - TARDEC (Warren, MI). He has recently graduated from the Naval Postgraduate School and is currently assigned to the US Army Capabilities Integration Center at Fort Eustis, VA.

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MAJ Hicks is married to the former Ashley Apel of New Caney, Texas and they have three children: Elaina, Clara, and Madeline Hicks.





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Disclaimer: The views represented in this report are those of the author and do not reflect the official policy position of the Navy, the Department of Defense, or the federal government.



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LIST OF ACRONYMS AND ABBREVIATIONS

ABS	Army Business Management Strategy
AACSB	Association to Advance Collegiate Schools of Business
AAFC	Army Acquisition Foundation Course
AAW	Army Acquisition Workforce
ABCC	Army Basic Contracting Course
AC	Acquisition Corps
ACE	Acquisition Center of Excellence
ACF	Acquisition Career Field
ACS	Advanced Civil Schooling
ADRP	Army Doctrinal Reference Publication
ADSO	Active Duty Service Obligation
AICC	Army Intermediate Contracting Course
AIPM	Acquisition Intermediate Program
AMB	Acquisition Management Branch
AMC	Army Materiel Command
APC	Acquisition Professionals Course
APM	Assistant Product Manager
ASA(AL&T)	Assistant Secretary of the Army (Acquisition, Logistics, and Technology)
ASA(M&RA)	Assistant Secretary of the Army (Manpower & Reserve Affairs)
ATMS	Army Talent Management Strategy
ATTRS	Army Training Requirements and Resource System
BDE	Brigade
BN	Battalion
BOLC	Basic Officers Leader Course
BRS	Blended Retirement System
BZ	Below the Zone
CCC	Captains Career Course
CGCS	Command General Staff College
CJCS	Chairman of Joint Chiefs of Staff
CMO	Contract Management Office
COA	Course of Action



CPT	Captain (O-3)
DA	Department of the Army
DAAC	Director, Army Acquisition Corps
DACM	Director for Acquisition Career Management
DA PAM	Department of the Army Pamphlet
DAU	Defense Acquisition University
DAWIA	Defense Acquisition Workforce Improvement Act
DL	Distance Learning
DLA	Defense Logistics Agency
DoD	Department of Defense
DOPMA	Defense Office Personnel Management Act
FY	Fiscal Year
HQDA	Headquarters, Department of the Army
HRC	Human Resources Command
ILE	Intermediate Level Education
IQC	Intermediate Qualification Course
JPME	Joint Professional Military Education
LTC	Lieutenant Colonel (O-5)
LTG	Lieutenant General (O-9)
MAJ	Major (O-4)
MEL 4	Military Education Level Four
MILDEP	Military Deputy
NPS	Naval Postgraduate School
NWC	Naval War College
OJT	On-the-job Training
OPM	Office of Personnel Management
OPMD	Officer Personnel Management Directorate



OPMS	Officer Personnel Management System
OSD	Office of the Secretary of Defense
PCC	Pre-Command Course
PEO	Program Executive Office
PLD	Proponency and Leader Development
PM	Program Management
PDM	Product Management
PME	Professional Military Education
ROTC	Reserve Officer Training Corps
SWOT	Strengths, Weakness, Opportunities, Threats
T&E	Test and Evaluation
TA	Tuition Assistance
TCM	TRADOC Capabilities Manager
TDY	Temporary Duty
TIS	Time in Service
USA	United States Army
USAASC	United States Army Acquisition Support Center
WIAS	Worldwide Individual Augmentation System



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I. INTRODUCTION

The Army's most important weapon is its people. Where the other services may man equipment, what we do is equip the Soldiers, the women and men who are the Army. That's where talent management comes into play.

—LTG James McConville (Dilanian & Akiwowo, 2017)

As this statement by the current vice chief of staff of the Army. Lieutenant General James McConville declares, the Army is about *people*, and critical to that resource is the identification, evaluation, development, and execution of each soldier's talent and skills. *The Army Talent Management Strategy, Force 2025 and Beyond*, published September 20, 2016, defines *talent* as “the intersection of three dimensions—skills, knowledge, and behaviors—that create an optimal level of individual performance” (Manpower & Reserve Affairs [M&RA], 2016, p. 4). Talent management is “a way to enhance Army readiness by maximizing the potential of the Army's greatest asset—our people” (M&RA, 2016, p.7). Graduate education is one way to enhance the skills, increase the knowledge, and develop the behaviors of the people who are afforded the opportunity to attend. The proper employment of talent management is imperative to any profession seeking to maintain a competitive edge over its adversaries in the global commons and the U.S. labor market. The dictionary defines *profession* as “a calling requiring specialized knowledge and often long and intensive academic preparation” (“Profession,” 2018). The Army expands the definition of *profession* to define the Army Profession. *Army Doctrinal Reference Publication* (ADRP) 1, titled the Army Profession, defines *Army Profession* as “a unique vocation of experts certified in the ethical design, generation, support, and application of land power, serving under civilian authority and entrusted to defend the Constitution and the rights and interests of the American people” (Department of the Army [DA], 2014). The experts previously mentioned are the officers, non-commissioned officers, and enlisted persons who join the Army and successfully complete entry-level, or basic, training and are certified to support and defend the Constitution of the United States. Commissioned officers are persons who are commissioned into the Army, complete officer training, and possess or soon obtain a baccalaureate degree from an accredited institution. The Army



Officer Personnel Management Directorate (OPMD) classifies new officers into a basic branch organized within one of four divisions—operations, force sustainment, health services, and operations support. Initially all officers perform duties as part of their primary branch, or occupation. However, later in an officer’s career, the officer may apply for a transfer into a functional area, or a new profession within the profession of arms. There are 13 functional areas within the Army, one of which is the Acquisition Corps. The Acquisition Corps conducts research and development, procurement, and management of weapon and information technology systems for the Army to employ in the fight to win our nation’s wars. Therefore, this research asks the following question: Is the Army maximizing its value with the current professional and military educational pathway for acquisition officers?

A. RESEARCH PURPOSE

The primary objective of this research is to determine the optimal educational path and developmental opportunities for U.S. Army acquisition officers. To better understand how the Army can produce the most qualified acquisition officer, this project seeks a solution on identifying the best educational framework that maintains a focus on true talent management. The Army assesses operational mid-level leaders with 5–10 years of operational experience into the Army Acquisition Workforce (AAW), where they will manage contracting activities as well as cost, schedule, performance, and risk of Army acquisition programs.

Currently, the Army has two centers to facilitate the basic instruction of an incoming acquisition officer: The Army Acquisition Center of Excellence (ACE) in Huntsville, AL, and the Naval Postgraduate School (NPS) in Monterey, CA. The ability to provide quality acquisition and military training together with a foundation in leading business practices creates a unique opportunity to efficiently train acquisition officers. It is vital that the AAW be led by the most talented and promising leaders to include its acquisition officers. If the U.S. Army better understood the opportunities available to the acquisition officer, it could maximize the value and return on investment of its newly assessed acquisition officers by streamlining their career paths and increasing their professionalism and workforce knowledge, thus leading to improved acquisition decision-



making. This case study aims to advance the level of insight into these issues and will establish the foundation for future research.

B. RESEARCH FOCUS

In order to identify an optimal path, this research builds from and answers the following questions:

- What are the Army's desired educational goals for acquisition workforce officers?
- What current educational pathways does the Army utilize to reach its desired educational goals for its acquisition officers?
- How do various graduate degrees benefit the Army Acquisition Enterprise?
- How can the Army align its talent management principles and strategy with graduate education for the acquisition officer?
- What are the relative advantages and disadvantages of the current educational paths and the alternative paths?

These questions are answered by conducting a literature review of Army policies and regulations, as well as scholarly papers, studies, and journal articles addressing the value of advanced degrees. Next, courses of action are developed outlining the Army's current educational pathways for acquisition officers and identifying their strengths, weaknesses, opportunities, and threats (SWOT) analysis. Lastly, an optimized course of action is developed and analyzed against the existing courses of action.

The questions outlined within this chapter provides a framework through which to explore and evaluate various options to optimize education alternatives for U.S. Army acquisition officers. Assessing the strengths, weaknesses, opportunities, and threats to each potential education alternative helps to identify the optimal path. The optimized educational development path can be leveraged to maximize the value that professional acquisition officers provide to the U.S. Army in its mission to fight and win the nation's wars.



(1) What are the desired educational goals for Army acquisition officers?

Acquisition officers are guided by the Defense Acquisition Career Manager (DACM) to complete Defense Acquisition Workforce Improvement Act (DAWIA) Level III certifications within their primary career field. Furthermore, it is the ultimate goal of the DACM that each officer obtains Acquisition Corps Membership once DAWIA Level III certification is achieved. Obtainment of Acquisition Corps membership is governed by Title 10 U.S. Code, Sec 1732, under paragraph (b)(1)(B)(i). The code states that

an officer must meet the educational requirements prescribed by the secretary of defense, which includes at least 24 semester credit hours of study from an accredited institution of higher education from among the following disciplines: accounting, business, business finance, law, contracts, purchasing, economics, industrial management, marketing, quantitative methods, and organization or management. (Defense Acquisition Workforce Improvement Act of 1990, 1990)

In order to remain competitive for promotion to Lieutenant Colonel (LTC) the officer must obtain Level III DAWIA certification and be Military Education Level 4 (MEL 4) training complete (Department of the Army [DA], 2014). Chapter IV goes into detail of options and timing windows an officer can complete their training requirements to remain competitive for promotion and achieve Army acquisition educational goals.

The purpose of maintaining educational proficiency in each of the three pillars is to ensure that Army acquisition officers are best prepared to make the challenging decisions that lead to the procurement of complex products or services. Acquisition officers are tasked to provide soldiers with the greatest capabilities and facilitate the highest levels of readiness needed to fight and win the nation's wars.

(2) What are the current educational pathways that the Army utilizes to reach its desired educational goals for acquisition officers?

Acquisition officers must meet their educational goals within each of the three acquisition professional development pillars at an individual level. An example of the most basic path would be for an officer to attend the Army Acquisition Professionals Course (AAPC), formerly the Army Acquisition Basic Course, for an assigned career field, either 51 A program management or 51 C contracting management, and then later complete the MEL 4 requirement. Those acquisition officers who complete AAPC and are selected to



attend resident MEL 4 at Command and General Staff College (CGSC) have the optional opportunity to pursue a graduate education through several local or online universities in addition to their CGSC coursework. This is one of several examples in which an Army acquisition officer can achieve the educational goals desired by the Army. Chapter IV provides a detailed listing and description of the various paths available to an acquisition officer, which are listed as courses of action (COA).

(3) How do various graduate degrees benefit the Army's acquisition enterprise?

The director, Acquisition Career Manager (DACM) in concert with the director, Army Acquisition Corps (DAAC) required by DAWIA to develop the total AAW, including Army acquisition officers. This goal is accomplished through developing policies, managing certifications, and providing opportunities for the AAW to attend acquisition-related education and training programs (Acquisition Support Center [ASC], n.d.d). The Human Capital Strategic Plan (HCSP) 2017–2021 provides guidance to the AAW regarding development efforts aimed to benefit the acquisition enterprise. Related to education, objective 2.3 of the HCSP is to develop the AAW through “identifying, implement, and leverage internal and external education and training best practices” (ASC, n.d.c)

Army acquisition officers are highly encouraged to pursue graduate degrees to promote to the rank of LTC. The majority of acquisition officers receive their graduate education at the rank of captain or major. Army Acquisition Management Branch (AMB) has identified trends that those officers with advanced degrees, specifically graduates from the Advanced Civil Schooling (ACS) program, possess greater talent and tend to show greater potential through their annual evaluation reports (K. Hassan, email to author, October 3, 2018). This may be attributed to the additional screening and selection process to allow officers to attend an ACS-funded program, which the Naval Postgraduate School (NPS) is a member. Based on the results of the Gansler Commission and other Government Accounting Office (GAO) reports, there is a need for program managers and contracting officers to possess a certain level of business shrewdness (Secretary of the Army, 2007). In a previous *Army AL&T* article, Dr. Robert Mortlock (2017) asserts that by investing in



more business education for program managers, the Army will see improved short-term and long-term acquisition benefit.

- (4) How can the Army align its talent management principles and strategy with graduate education?

Talent management is the avenue through which the Army develops, employs, and assesses its most valuable resource, the people within the organization, to achieve its enterprise goals. The USAASC reflects on talent management as a tool to attract, retain, develop, and align talent with current and future requirements through a deliberate process that is nested with the Army's goal to identify, grow, and develop future leaders (Spisak C. A., 2018). Examples of the tools the USAASC has at its disposal for implementing talent management practices within the AAW are a common evaluation processes, developmental rotations, mentoring programs, and leveraging a centrally selected screening process for critical leadership positions. Talent management should provide value to both the Army and the individual officer.

The portion of talent management focused on development can be directly supported by graduate education. A challenge with encouraging graduate education is the conflict it poses regarding professional work experience. The time an officer spends in studies comes at the opportunity cost of performing their duties within the AAW. The challenge for Army leadership is that they must balance job experience for their officers against education to strike the right balance of talent management for each individual officer.

The reason the Army encourages graduate education is that it provides acquisition officers with greater insights within the business environment and ensures they will be better resourced to solve complex acquisition problems. The goal of graduate education is that it complements the DAWIA training requirements. The intent is to open the officers' minds to broader business strategy concepts that go beyond the federal government acquisition focus and develop their critical thinking abilities. Graduate education also provides an officer with exposure to an expanded networking environment that can provide great social resource benefits to not only the individual but also payback to the AAW.



- (5) What are the relative advantages and disadvantages of the current educational paths and the alternative paths?

This research explores and evaluates various educational paths for U.S. Army acquisition officers. Each of the educational pathways results in officers acquiring differing levels of acquisition-specific understanding through a combination of classes and work experience. Each pathway requires different time spans, which may include multiple temporary duty (TDY) or permanent change of station (PCS) assignments that incur an additional financial burden to the Army.

Assessing the strengths, weaknesses, opportunities, and threats of each potential educational alternative will facilitate identification of an optimized path. The intent of this study is to identify an optimized educational development path for Army acquisition officers that meets the three pillars of educational goals and provides the greatest talent to the AAW. The optimal path can be instituted as a standardized approach to maximize the value that professional acquisition officers provide to the U.S. Army in its continuing purpose of fighting and winning our nation's wars.

C. SUMMARY

This chapter provided a brief introduction to the primary question at hand: Is the Army maximizing its value with the current career and educational pathway for acquisition officers? The chapter began by identifying the Army as a profession, more specifically as a profession of arms. Then it identified and expounded upon some of the members of the profession of arms. Next it identified some of the members of the profession of arms as commissioned officers who may transfer into one of 13 functional areas during their career. Of the 13 functional areas available, only the acquisition corps is the focus of this paper. Chapter II, Background, provides a historical review of the officer career paths and acquisition reforms as they have intertwined throughout the years shaping the professional and educational requirements of the acquisition officer. Chapter III, Literature Review, provides summaries of the relevant studies and articles on talent management, acquisition officer educational paths, and the value of an MBA to organizations and individuals. Chapter IV, Courses of Action Introduction, outlines the courses of action available to acquisition officers to satisfy professional, military education, and graduate education



requirements necessary by law and regulation. Chapter V, Courses of Action Analysis, analyzes each course of action's strength, weakness, opportunities, and threats. Chapter VI, Conclusion, summarizes the findings, recommends the best course of action based on the findings, and provides recommendations for future research.



II. BACKGROUND

A. HISTORY OF THE OFFICER CAREER PATHS AND ACQUISITION REFORM INITIATIVES

Modern-day officer career paths can trace their origin to the transition from a draftee Army to an all-volunteer force in the early 1970s. In 1972, the U.S. Army War College published the findings of a study on military professionalism as the Army took an introspective look at the professionalism of the force during Vietnam and the Cold War (DA, 2014). The U.S. Army's Office of Personnel Management (OPM) office was formed following the publication of the report. In 1981, Congress passed the Defense Officer Personnel Management Act (DOPMA) to provide a single standard to the assessment and promotion of officers throughout the armed services (Rostker et al., 1992). In 1984, major revisions to Officer Personnel Management System (OPMS) were implemented, carrying forward the requirements enacted by DOPMA. It was during this revision to OPMS that functional areas were developed. Department of the Army Pamphlet 600-3 (DA PAM 600-3) defines a *functional area* as "a grouping of officers by technical specialty or skills other than an arm, Service, or branch that usually requires unique education, training, and experience" (DA, 2014). Table 1 displays all officer branches and functional areas by the Officer Personnel Management Directorate Divisional breakdown.



Table 1. OPMD Divisions, Basic Branches, and Functional Areas. Source: Human Resources Command (2018).

Operations Division (OD)	Force Sustainment Division
Infantry	Acquisition Corps*
Armor	Adjutant General
Aviation	Finance Corps
Field Artillery	Transportation Corps
Corps of Engineers	Ordnance Branch
Military Police	Quartermeaster Corps
Chemical Corps	Logistics Branch
Air Defense Artillery	
Army Special Operations Forces	Operations Support Division
Civil Affairs	Signal Corps
Psychological Operations	Military Intelligence Branch
Special Forces	Cyber Branch
	Cyber-Electronic Warfare
Health Services Division	Functional Areas
Army Medical Corps	FA 26 - Network/Information Engineer
Army Dental Corps	FA 30 - Information Operations
Army Veterinary Corps	FA 34 - Strategic Intel
Army Nurse Corps	FA 40 - Space Operations
Army Medical Specialist Corps	FA 46 - Public Affairs
Army Medical Service Corps	FA 47 - Academy Professor
Readiness Branch	FA 48 - Foreign Area Officer
Division Support Branch	FA 49 - Operations Research/Sys Analysis
HSD Reserve Branch	FA 50 - Force Management
Leader Development Branch	FA 51 - Acquisition Corps
	FA 52 - Nuclear and Counter Proliferation
	FA 57 - Simulations Operations
	FA 59 - Strategic Plans & Policy

The implementation of functional areas in 1984 established the precedent for the formation of the 51 series, Acquisition Workforce Functional Area, in 1990 (DA, 2014). Figure 1 provides a visual timeline of major personnel management and acquisition reform milestones.

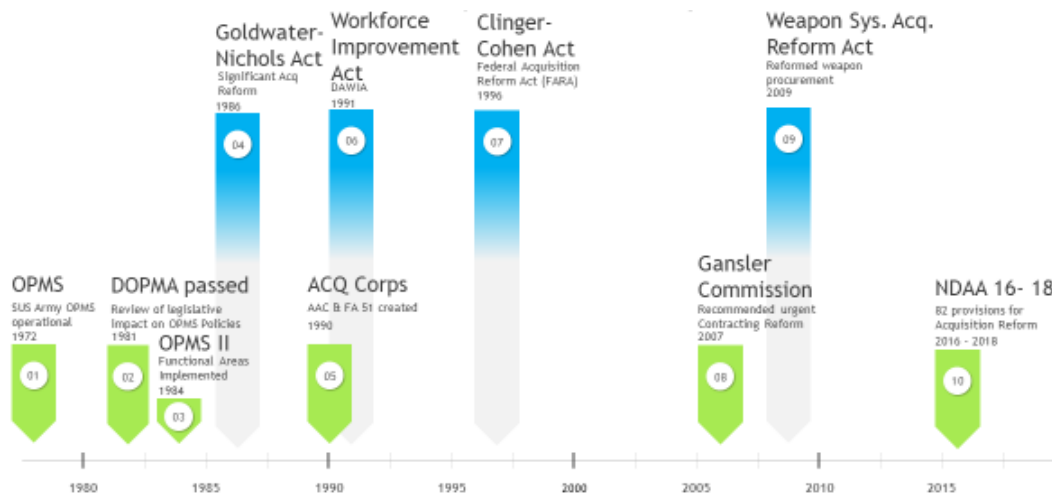


Figure 1. OPM and Acquisition Reform History. Adapted from DA (2014).

In 1986, legislation was enacted that laid the cornerstone for acquisition reform. The Goldwater-Nichols Act of 1986 initiated a monumental reorganization of the Department of Defense (DoD). Two significant adjustments for the acquisition element of the DoD occurred during this time. First Goldwater-Nichols increased civilian oversight and involvement within the acquisition enterprise. Second, this Act instituted a more efficient and simplified chain of command for major weapon system programs (Sullivan, 2014). Furthermore, Goldwater-Nichols established the Joint Professional Military Education (JPME) and required the services to prioritize and improve joint operations, training, and billets (Goldwater-Nichols Act, 1986).

In 1991, another major acquisition reform stone was laid with the implementation of the Defense Acquisition Workforce Improvement Act (DAWIA). DAWIA established a single Defense Acquisition Workforce and mandated the professionalization, development, and management of the workforce. The law established DAWIA certification requirements, which are reportable training, education, and experience requirements for all acquisition career fields (ACF) and levels. Additionally, DAWIA established the Defense Acquisition University (DAU) to prepare and certify senior acquisition professionals for positions within the defense acquisition enterprise. DAWIA unified the training and

standardized the requirements to professionalize the acquisition workforce (Defense Acquisition Workforce Improvement Act, 1990).

The Clinger-Cohen Act (CCA) of 1996 sought to improve acquisition by requiring full and open competition and competitive range determinations. It also requires the program manager to track and report CCA compliance before deployment decisions of the program (AcqNotes, 2018). The Weapon Systems Acquisition Reform Act (WSARA) of 2009 further tried to improve the acquisition process of major weapon systems. WSARA required the Milestone Decision Authority to review cost and schedule projections, and to consider termination if those projections were beyond 25% of the original cost and schedule baselines (Weapon System Acquisition Reform Act of 2009, 2009). It also mandated preliminary design reviews before the Milestone B decision (Weapon System Acquisition Reform Act of 2009, 2009). Lastly, the National Defense Authorization Acts of 2016, 2017, and 2018 have directed 82 provisions reforming acquisition throughout the DoD (Schwartz et al., 2018). Specifically, these provisions have sought to reverse some of Goldwater-Nichols, provide service chiefs with more authority over service acquisitions, and pursue improvements to the acquisition workforce.

This brief survey of the history of the Army's Officer Personnel Management System and the integration of acquisition reform throughout the same period shows several parallel and intersecting trends. One trend is the increasing professionalism of the Officer Corps. For acquisition officers, this professionalism includes a grounding in fundamental business practices and assessment. A second trend is the increase in joint training and support. For the acquisition officer, joint certification is not merely understanding the structure and tactics of sister services but also understanding the operational environments of the joint service to ensure programs fulfill joint requirements. These trends require a pathway that is flexible and supportive to allow the officer the opportunity to fulfill JPME requirements, develop sound business practices, and perform the acquisition duties that will demonstrate and refine acquisition acumen.

B. ARMY ACQUISITION CAREER OVERSIGHT

The U.S. Army Acquisition Support Center (USAASC) provides oversight of the AAW as well as supporting program executive offices (PEO) with resource management,



human resources, and force structure (ASC, n.d.g). Within the USAASC organization is the Army Director, Acquisition Career management (DACM) office. This office leads the professional development and talent management of the AAW through education, training, and career management activities. Figure 2 depicts the relationship of the various DACM offices. The mission of the DACM is to “identify acquisition workforce trends and challenges, and to develop policies and programs to support those challenges” (ASC, n.d.d). The April 20, 2018, DACM memorandum provides a talent management strategy for the AAW that applies to the professional development of Army acquisition officers (Spisak, 2018). The talent management strategy describes the talent management framework, which guides the AAW’s development of tools, processes, and programs to ensure future AAW senior leaders are prepared to meet and achieve the acquisition requirements of tomorrow.

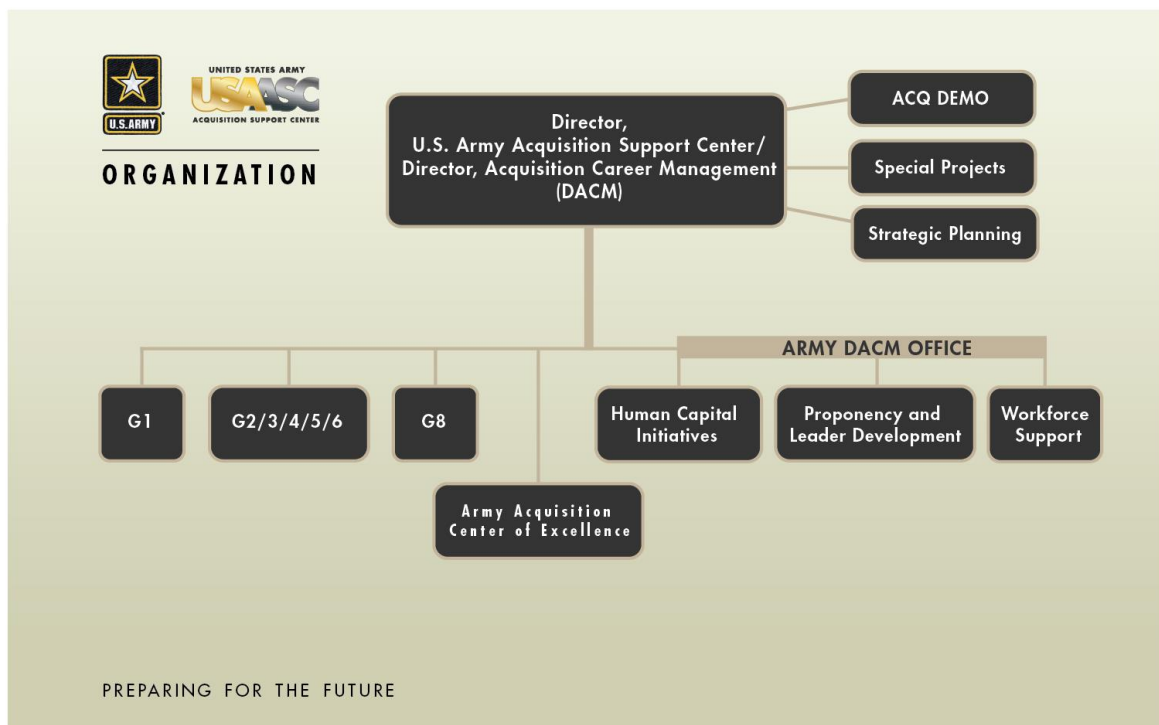


Figure 2. U.S. Army Acquisition Support Center/Director, Acquisition Career Management (DACM) Organization Structure. Source: ASC, n.d.g).

The DACM oversees three organizational divisions which collectively direct and control the talent management of the AAW (ASC, n.d.b). The Human Capital Initiatives (HCI) Office is focused on DoD level human capital policy and planning. Proponency and Leader Development (PLD) aligns service acquisition policy with DoD policy and congressionally mandated requirements to develop and provide a professional acquisition workforce to the Army. Workforce Support is focused on individual development initiatives and activities.

For Army acquisition officers, the DACM is the chief advisor to the Principle Military Deputy (PMILDEP) and Director, Army Acquisition Corps (DAAC). The DACM also represents the Office of the United States Assistant Secretary of the Army for Acquisition, Logistics, and Technology (OASA[AL&T])/Agency Acquisition Executive (AAE). The DACM's PLD division supports AAE, PMILDEP, and DAAC decision-making efforts (ASC, n.d.e).

The Defense Acquisition Workforce Improvement Act of 1990 charges the DAAC as the responsible agent for strategic guidance for the accessions, acceptance, membership, and talent management of military and civilian personnel in the AAC. The DAAC has a significant role in shaping the talent management and career progression of Army acquisition officers. The AAE specifically charged the DAAC to act as the proponent and personnel developer for the military acquisition officer functional area 51 and the military noncommissioned officer (NCO) career management field 51. Additionally, the DAAC is to provide oversight of AAC military promotions, selections, retentions, and retirements for officers and NCOs (Office of the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) [OASA(ALT)], 2017).

C. ACQUISITION OFFICER CAREER TIMELINE

Figure 3 displays the current Acquisition Corps officer career timeline. This timeline integrates the JPME, DAWIA, and assignment requirements necessary for an officer to achieve Army and acquisition milestones and progress in his or her military career. Army officers can volunteer to assess into the acquisition functional area (FA-51) at the grade of captain or major only after completing key developmental (KD) positions within their basic assigned branch. Once an officer is assessed into the acquisition career



field, either they are assigned to the program management (51A), contracting (51C), or test pilot (51T) primary career fields by Army Human Resources Command (HRC). The career field assignments are based on factors such as the desires of the officer, prior education, experience, and needs of the Army.



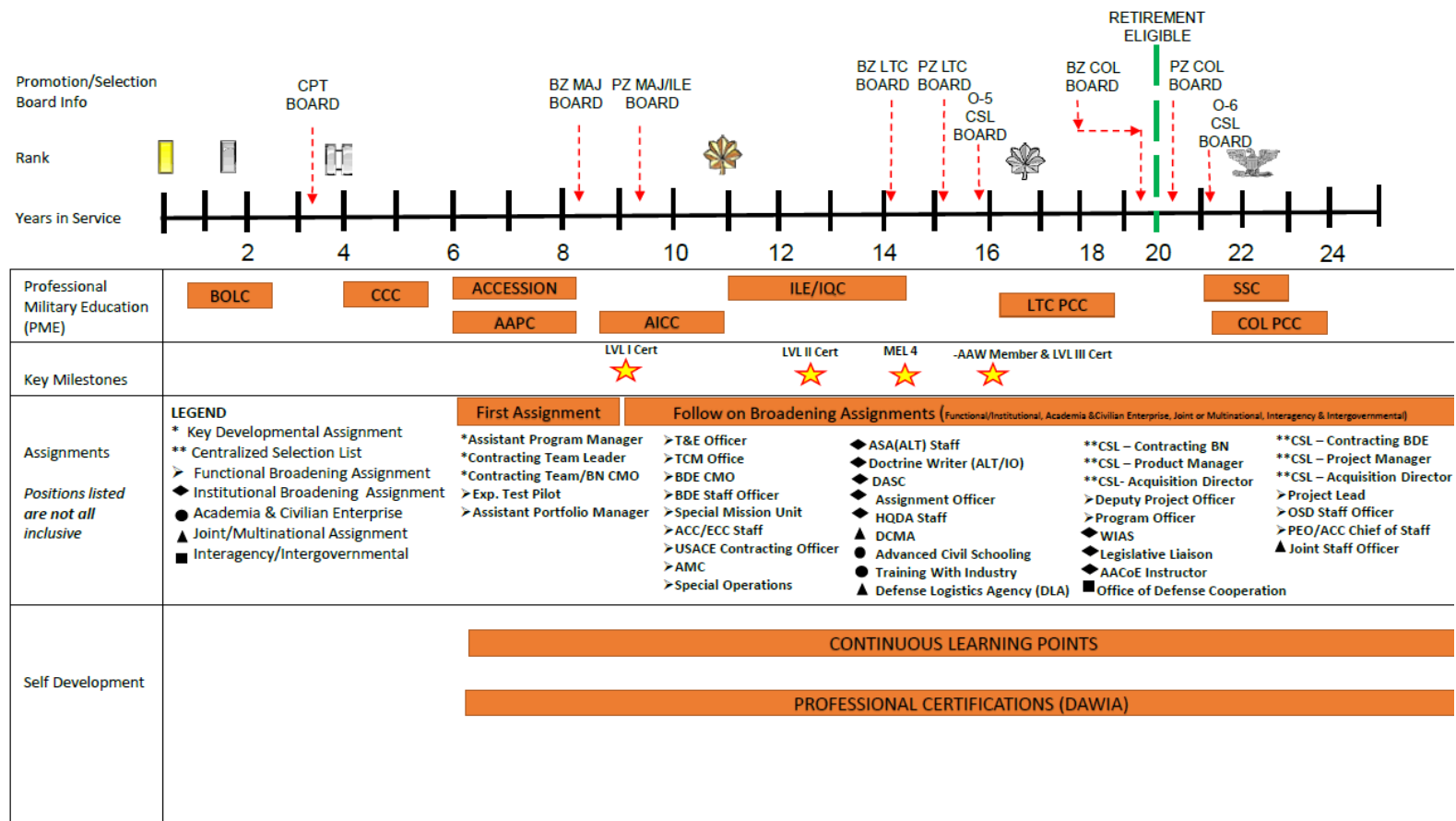


Figure 3. Acquisition Officer Timeline. Source: (ASC, 2017).

The acquisition portion of an officer's career begins between years 5 and 10 (ideally 5–7), following the officer's initial commission. During this two- to five-year window, the officer completes an operational company command (key development at the rank of captain) and then voluntarily applies to transfer to the acquisition workforce (51 series). Following accession into the AAW, the officer attends the Army Acquisition Professionals Course, formerly the Acquisition Foundation Course, at the Army Acquisition Center of Excellence (AACOE) in Huntsville, AL. This nine-week course educates the officer to DAWIA Level II Program Management and DAWIA Level I Contracting. Following this course, the officer performs his or her first assignment either as an assistant product manager or as a contingency contracting officer. After 24 months of successful performance in these positions, the officer is certified as Level II DAWIA within his or her initial Acquisition Career Field (ACF), either as a 51 A (program management) or as a 51 C (contracting management). Also, within these same years in the officer's career, the Army may select the officer for promotion to major and to fulfill MEL-4 requirements by attending Intermediate Level Education (ILE)/CGSC through one of three venues: resident, satellite, or distance learning (DA, 2014).

Furthermore, 51 C officers return to the AACOE for one month to attend the Intermediate Contracting Course and fulfill all the required DAWIA education requirements necessary for Level II Contracting certification. Alternatively, a select group of officers may attend NPS for 18 months using the Advanced Civil Schooling Program instead of attending the AACOE. Upon completion of NPS, these officers receive either DAWIA Level III Program Management or Level III Contracting education credit. These officers then proceed to their first acquisition assignment to complete their time in position requirements to receive full DAWIA Level III certification (DA, 2014).

After the first assignment, the officer either attends ILE (resident/satellite) and Advanced Civil Schooling (ACS) or is reassigned to a broadening assignment to enhance the officer's understanding of the acquisition enterprise. During this time, the acquisition officer balances program and job requirements with DAWIA education opportunities to fulfill the requirements for DAWIA Level III certification in the primary ACF. Additionally, as a major, the acquisition officer applies for Acquisition Corps membership after four years in the acquisition workforce. Acquisition Corp membership can only be



obtained after achieving Level II DAWIA certification in a primary ACF. Along with Level II DAWIA certification the officer “must have completed at least 24 semester credit hours of study from an accredited institution of higher education in accounting, law, business, finance, contracts, purchasing, economics, industrial management, marketing, quantitative methods, or organization and management” (DA, 2014, p. 439). Upon receiving Acquisition Corps membership and level III DAWIA certification in the primary ACF, the acquisition officer is poised for promotion from major to lieutenant colonel and selection on the Centralized Section Board as either a product manager or contracting command (DA, 2014).

D. ACQUISITION OFFICER EDUCATIONAL FRAMEWORK

There are three education pillars that make up professional development for an Army acquisition officer. These pillars, shown in Figure 4, are the mandatory DAWIA training requirements, mandatory MEL 4 training requirements, and graduate-level education. Graduate-level education refers to the pursuit of any advanced degree beyond a baccalaureate degree. Individual officers have opportunities to develop themselves within each of the pillars through various means, allowing a great deal of flexibility throughout the career timeline of an acquisition officer.





Figure 4. The Three Pillars of an Acquisition Officer's Professional Development. Adapted from DA (2014).

This educational flexibility allows individual officers to be assessed into an acquisition career field over a broader window of time as noted in the acquisition officer timeline in Figure 4. Once an officer has satisfactorily met their basic branch KD requirements, they are eligible to join the acquisition workforce; this could be as a captain at the end of their fifth year of commissioned service or several years later as a mid-grade major. This wide eligibility window enables officers with varying degrees of operational and leadership experience to transition into the acquisition workforce and broadens the number of candidates the Army has to choose from, enhancing the talent, competence, and performance of the AAW community.

To provide value to the acquisition process, the Army acquisition officer must ensure proficiency not only as a knowledgeable acquisition officer, but also as a skilled commissioned officer of the military profession. An officer's DAWIA education, graduate education, and MEL 4 training must be thoughtfully nested within their career timelines to enable balanced proficiency in each of these areas against on-the-job experience.

The current career pathway of an acquisition officer is dynamic and diverse in order to facilitate the varied backgrounds and timelines of the acquisition workforce. However, as described in this chapter, a general pathway has been defined within DA Pamphlet 600–3, 2014 edition. Using DA PAM 600–3 as the primary reference, this chapter provides a timeline of the historical development of the U.S. Army’s Officer Personnel Management System, including key acquisition reform legislation that affects the Army acquisition officer’s career path. The general career pathway for the Army acquisition officer is also described here.

Army acquisition officers must satisfactorily complete intermediate level education (ILE) at the rank of major to maintain competency within the military profession and meet their MEL 4 training requirements (DA, 2014). ILE can be completed through various means, including distance learning. The most common means for acquisition officers is satellite ILE, resident course Command and General Staff College (CGSC), or resident NPS Naval War College JPME. Those that attend satellite ILE or CGSC must also complete the follow-on FA 51 Intermediate Qualification Course (IQC) to achieve MEL 4 training certification (ASC, n.d.f). Additionally, DA Directive 2012–21 allows acquisition officers to complete the NWC JPME courses in lieu of an Army ILE program (Spisak C. , 2015).

Once an officer is assessed into an acquisition career field, they will also complete DAWIA training requirements through achieving Defense Acquisition University (DAU) equivalency credit. This DAU equivalency credit can be obtained through two institutions, by attending the Army Acquisition Professionals Course (AAPC) or through the Naval Postgraduate School (NPS). See Appendix A for a listing of DAU equivalency credit achieved for APC and NPS courses. These two options ensure a newly assessed acquisition officer is appropriately trained to DAWIA standards prior to beginning work within Army acquisitions organizations.

A DA memorandum titled *Fulfillment of DAU Courses through NPS Masters of Acquisition and Contract Management* provides guidance regarding fulfillment of DAU courses required for DAWIA Levels I, II, and III certification in contracting, through



completion of the Naval Postgraduate School Masters of Acquisition and Contract Management—Section 815/835 curricular programs and courses (Spisak, 2013).

Officers that attend AAPC must also pursue additional DAWIA training requirements to achieve Level III training certification within their primary career field by attending DAU courses during their first or broadening assignments. The list of Level III DAWIA training requirements is provided in Appendix B. AAPC graduate contracting officers are also required to attend the Army Intermediate Contracting Course (AICC) four-week resident course upon completion of two years of operational contracting experience (ASC, n.d.a).

Graduate-level education for Army acquisition officers is the only pillar that has no mandatory requirements for young field grade officers. However, there is an expectation that as a member of the military profession, officers should seek every opportunity to advance their knowledge and abilities to further benefit our nation. In achieving the graduate education obligation, officers can pursue their graduate degree in various curriculums from STEM concentration to business, law, or others. Officers have three options available to choose from in order to complete graduate education: self-funded, tuition assistance (TA),¹ or advanced civil schooling (ACS).² If they elect to apply for Army funding to cover the cost of the degree through TA, they can attend part-time, evening, or online education in pursuit of their advanced degree. If officers elect to apply for ACS and are selected, they must attend a brick-and-mortar university program (K. Hassan, email to author, October 3, 2018).

The three pillars of education provide officers with a great deal of flexibility in planning their career path. They must do this carefully, as their educational investments are made at the cost of acquisition assignment experience. DAWIA certification requires not only that education milestones be completed, but there is also the need to back up the training with four years of work experience to achieve Level III certification and Acquisition Corp membership. This balance ensures that Army acquisition officers remain competitive for

¹ Army Tuition Assistance requirements and details can be found at the U.S. Army's GO ARMY ED website: https://www.goarmyed.com/public/public_tuition_assistance_policies.aspx.

² Army Acquisition Officer Advanced Civil Schooling requirements and details can be found at the U.S. Army's Acquisition Support Center website: <https://asc.army.mil/web/career-development/programs/advanced-civil-schooling/>.



promotion where they are rated amongst their peers who have continued in operational positions without the burden of gaining additional education in Army acquisitions.

It must also be noted that officers have the ability to provide input to the educational pathway they pursue, but they are not guaranteed approval of their pursuit. For instance, an officer may desire to attend graduate school via ACS, however the Army may choose not to fund the individual officer for the ACS option. In this case, the officer would be required to pursue TA or use individual funding if he or she still desired to complete graduate school. Factors such as the individual's career timeline, performance history, professional potential, academic background, and funding availability are weighed by the DACM's PLD division when authorizing and funding an educational pathway for individual officers (Acquisition Management Branch [AMB], 2018a).

E. ARMY ACQUISITION WORKFORCE TODAY

Today the Army Acquisition Workforce (AAW) is composed of 25,842 Acquisition Workforce members and 12,799 Acquisition Corps members, for a combined total of 38,641 members active component (military) and civilian (AMB, 2018a). There are 13 DoD Acquisition Career Fields (ACF), of which military personnel can only certify into five of them: program management, contracting, test and evaluation, information technology, and engineering. Of these five ACFs, only program management and contracting are primary ACFs requiring officers to achieve level III certification prior to seeking a secondary certification (AMB, 2018a). Currently 4% of the AAW is made up of commissioned and noncommissioned military members (ASC, n.d.b). As of 25 July 2018, manning authorizations for acquisition officers is 302 captains, 558 majors, 380 lieutenant colonels, and 141 colonels. Regarding graduate education, over 75% of majors and 96% of lieutenant colonels hold an advanced degree (AMB, 2018a).



III. LITERATURE REVIEW

In 2015, Curtis Brooker, Keith Miner, and Stephanie Montano completed an NPS MBA Professional Report titled *Army Acquisition Training: An Analysis of Costs and Benefits* (Brooker et al., 2015). Their report evaluated the most cost-effective approaches to complete the three pillars of the acquisition officer's professional development (JPME, Graduate Education & DAWIA Level III certification). They determined that the most cost-effective approach was to complete all three requirements at the Naval Postgraduate School (Brooker et al., 2015). Their research determined the typical cost of completing all requirements at NPS as "\$239,542, with a four and a half year ADSO equating to a cost of \$53,232 per year of payback" (Brooker et al., 2015). The ACS course of action came to a cost of \$426,010, with a \$94,669 per year cost of payback for a four and a half year ADSO (Brooker et al., 2015). Finally, completing a degree using Tuition Assistance (COA 3) resulted in a cost of \$281,203, with a \$140,602 per year payback from a two-year ADSO (Brooker et al., 2015).

The Army Talent Management Strategy (ATMS), Force 2025 and Beyond (M&RA, 2016) defines talent and guides talent management practices. Talent management provides the Army's strategic vision and framework for employing future focused human capital management practices to maintain readiness and enhance retention of the workforce: officers, non-commissioned officers, enlisted persons and civilians. Talent is the unique "intersection of skills, knowledge, and behaviors" in every person (M&RA, 2016, p. 4). It is a holistic concept and approach to capture the fullness of each person's life experience. Skills range from conceptual to technical (M&RA, 2016). The ATMS describes knowledge as "the further development of a person's several intelligences and an extension of their talents" (M&RA, 2016, p. 7).

The ATMS recognizes "some knowledge is acquired via training and life experience," however it emphasizes formal education as critical to the development of mental capabilities within its workforce (M&RA, 2016, p. 7). Specifically, the Army "education teaches people how to think, not what to think" (M&RA, 2016, p. 7). Education increases people's ability to "rapidly assess unanticipated situations and formulate courses



of action leading to desired outcomes” (M&RA, 2016, p. 7). This guiding document provides the business case for this area of study and the recommendations contained within this study (M&RA, 2016). It identifies the key to an adaptable Army Profession as a highly educated workforce (M&RA, 2016). Lastly, the ATMS is aligned with the Army Business Management Strategy, ensuring it is outcomes-focused, seeks best value, and maintains a holistic approach with enterprise-level thinking.

“The Army Business Strategy (ABS) 2017–2021 provides a strategic foundation upon which the Army can apply enterprise approaches for the improvement of business operations to generate and sustain resources” (Office of Business Transformation, 2017, p. 4). The ABS focuses on best value and cost reduction through the application of management best practices (Office of Business Transformation, 2017). Army business operations must develop and sustain leader and manager training and education programs with a particular focus on innovative business management approaches and techniques to capitalize on established private and public sector best practices (Office of Business Transformation, 2017). Additionally, the ABS directs ILE and the Civilian Education System (CES) Advanced Course, and Senior Service College curricula to offer business management related elective programs (Office of Business Transformation, 2017).

Retaining Officer Talent—SSI Officer Corps Strategy Series, published in 2010 prior to implementation of the Blended Retirement System (BRS), divided an officer’s career into four distinct phases: “Phase I Receipt of Commission to End Active Duty Service, Phase II End of ADSO to 10 Years of Service, Phase III 10 to 20 Years of Service, and Phase IV 20 Years of Service to Mandatory Retirement” (Wardynski et al., 2010, pp. 23–25). The report found that officers who achieve 10 years of service are 80% more likely to remain on active duty until retirement (Wardynski et al., 2010). At this time the officer’s weighs the retention decision heavily on pursuing higher education goals while in the Army (Wardynski et al., 2010). Additionally, it found that getting officers to the 10-year mark requires the creation of “positive expectations of continued employment within the officer’s talent set, selection to field grade rank, and rewarding service to the 20-year point” (Wardynski et al., 2010, p. 24). Between year 10 and year 20 of service, officers shift focus to maintaining or improving family, medical, and other benefits as determining factors to determine retention (Wardynski et al., 2010). Lastly, the authors concluded that “cash



retention incentives entail no investment in human capital, yield no productivity gains, and saddle taxpayers with an unnecessary expense” (Wardynski et al., 2010, p. 32).

On March 6, 2018, Jim Perkins wrote a commentary for *War on the Rocks* entitled “The Military Needs Reform, Not a Raise.” Perkins (2018) argues well-intentioned pay raises are not aligned with long-term interests of the military and the country. Instead, pay raises deepen the civil-military divide and fail to address the root cause for the defense service’s recruitment and retention challenges. Perkins (2018) champions the full implementation of the 2015 Forces of the Future recommendations, which call for increased career flexibility and non-cash benefits (less frequent moves and increased options for education while in uniform) to improve career satisfaction.

There are several directives, memorandums, and pamphlets that apply to professional development goals and initiatives for Army Acquisition Officers. DA PAM 600–3 outlines officer development and career management programs for each of the Army’s career branches and functional areas (DA, 2014). DA PAM 600–3 is the service-member’s primary reference to inform career pathways, opportunities for advancement, and development decisions. DA Directive 2012–21 allows acquisition officers to complete the NWC JPME courses in lieu of an Army ILE program (DoD, 2015). A DA memorandum titled *Fulfillment of DAU Courses through NPS Masters of Acquisition and Contract Management* provides guidance regarding fulfillment of DAU courses required for Defense Acquisition Workforce Improvement Act (DAWIA) Levels I, II, and III certification in contracting, through completion of the Naval Postgraduate School Masters of Acquisition and Contract Management—Section 815/835 curricular programs and courses (DoD, 2013). The DA memorandum titled *Department of the Army, Acquisition Career Field* “provides uniform guidance for managing acquisition career field (ACF) certification” (Spisak, 2014, p. 1). “It is DoD policy that the primary objective of the Army Acquisition Workforce education, training, and career development program is to create a professional, agile, and motivated acquisition workforce that consistently makes smart business decisions, acts in an ethical manner, and delivers timely and affordable capabilities to the soldier” (Spisak, 2014, p. 1).



The Army Acquisition Workforce Proponent Brief is an annual brief provided by the U.S. Army Acquisition Support Center (USAASC) to the Acquisition Workforce at NPS. The brief provides an overview of the current state of the acquisition workforce, that is, the number of workforce members, number of Corps members, total Army Acquisition workforce numbers, and so on. Additionally, the brief explains how the USAASC can assist the individual with career decisions, educate the workforce on the legislative and regulatory requirements impacting each individual, and provide enterprise-wide awareness to the workforce (AMB, 2018a).

The report on Why Management Education Matters provides an analytical review of what benefits have been realized throughout industry from various management degrees and was prepared by the Association to Advance Collegiate Schools of Business (Association to Advance Collegiate Schools of Business [AACSB], 2005). The AACSB provides accreditation to less than 5% of business programs globally. “Out of approximately 13,000 business programs worldwide, only 800 have earned the sought-after accreditation, which also links together over 1,600 member organizations” (AACSB, n.d.a). The AACSB “seeks to accelerate innovation and amplify impact in business education...through engagement among business, faculty, institutions, and students in order to align business education with business practice needs” (AACSB, n.d.b). An empirical analysis of the effect of MBA programs on an organization’s success examines the value of MBA degrees. The paper finds that an MBA adds value to both MBA recipients and the organizations who employ them (Gupta & Bennett, 2013). The research identifies the value to be in the form of knowledge and skills acquired while taking academic courses in the MBA programs.

The article “Impact of Information Overload on Students’ Learning: An Empirical Approach” provides a mixture of quantitative and qualitative analysis to understand the impact on students when they are confronted with too much information. Information overload occurs when a large amount of information beyond one’s capacity to process is communicated. The study shows that individuals will experience information overload at different points, and certain steps can be taken to reduce or avoid overload situations. Additionally, there is a correlation between information overload, working memory, and cognitive load. Working memory was first studied by John Sweller in 1988 and further



studied by Austin in 2009 and Meinz and Hambrick in 2010. Information overload was studied by Bawden and Robinson in 2009. Khalid et al. utilized these sources to define working memory, also known as short-term memory, “as the ability to maintain task relevant information in a highly active state” (Khalid et al., 2016, p. 1) When working memory capacity falls below the information being presented to an individual, that person enters into a state of cognitive overload. This study, as well as related studies by researchers in the field of cognitive and social sciences, shows that course overloading can lead to cognitive overload. Cognitive overloading prevents an individual from developing an understanding of topics or a useful memory of the topic or materials presented (Khalid et al., 2016). Course overloading reduces the benefit to individuals and diminishes the impact they may have on their organizations.



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IV. COURSES OF ACTION INTRODUCTION

This chapter details the potential pathways an acquisition officer has available to fulfill the three pillars of Acquisition Professional Development. A supplemental career timeline is presented with each course of action (COA) to identify the available windows of opportunity in which an officer can complete each parameter of the COA within their own unique career timeline. Each COA section of this chapter also includes unique strengths, weaknesses, opportunities, and weaknesses (SWOT assessment). The purpose of the SWOT assessment is to identify the distinguishable characteristics of each COA, along with potential opportunities for improvements to the current educational pathways for acquisition officers.

The COAs of this analysis are matched to the COAs of the 2015 NPS MBA Professional Report titled *Army Acquisition Training: An Analysis of Cost and Benefits* (Brooker et al., 2015). The COAs referenced are as follows:

- “COA 1: Accomplish MBA, JPME, and DAWIA Level III Equivalency while at NPS (Brooker et al., 2015, p. 35).”
- “COA 2: Accomplish MBA using ACS; ILE via resident or satellite followed by IQC; ACQ Basic followed by resident DAU for DAWIA Level III (Brooker et al., 2015, p. 36).”
- “COA 3: Accomplish MBA using TA and personal funds; ILE via resident or satellite followed by IQC; ACQ Basic followed by Resident DAU for Level III (Brooker et al., 2015, p. 37).”

COA 1 of the referenced MBA Professional Report is further broken into COAs 1A through 1C within our report due to the establishment of a new Master of Systems Engineering Management (522) NPS curriculum option. COA 2 and COA 3 remain unchanged. Due to the findings of the 2015 report, detailed analysis of COA 2 and COA 3 will be omitted from the analysis of this report.

Each of the curriculums presented within COAs 1A–1C are available to the acquisition officer attending NPS. The 815 and 816 MBA curriculums are provided by the Graduate School of Business and Public Policy (GSBPP), while the 522 curriculum is provided by the Department of Systems Engineering. GSBPP provides two. The 815 option



is an MBA with a specialization in Acquisition and Contract Management, and the 816 option is an MBA with a specialization in Defense Systems Acquisition. Conversely, the Department of Systems Engineering offers the 522 option, which results in a Master of Science in Systems Engineering Management (MS-SEM). The following paragraphs provide more detail on the various options based on the 2018 Academic Catalog for NPS.

“The MBA programs are defense-focused and seek to provide the officer with professional knowledge and skills and to develop broad critical-thinking and analytical abilities that will benefit officers in their future careers” (Naval Postgraduate School [NPS], n.d.c). “The Acquisition and Contract Management curriculum is an interdisciplinary program that integrates management theory, accounting, economics, finance, behavioral science, management theory, operations/systems analysis, and specific courses in acquisition and contracting” (NPS, n.d.b). “The Systems Acquisition Management curriculum is an interdisciplinary program designed to integrate business principles, program leadership and management theory, operations analysis, and systems engineering applications” (NPS, n.d.e). Both programs are “uniquely tailored to federal government acquisition management and intensive exposure to the fundamental principles of the acquisition environment” (NPS, n.d.d).

Also, both MBA curriculums are accredited by several national and regional organizations. First, all NPS degrees are regionally accredited by the Western Association of Schools and Colleges (WASC) (NPS, n.d.a). Secondly, and more importantly, the MBA programs are nationally accredited by the AACSB. The AACSB accreditation supports the desire of the Graduate School of Business to provide a quality business and strategic management education to its students by establishing and maintaining a world-renowned set of standards (AACSB, n.d.b).

“The MS-SEM program is an interdisciplinary program combining systems engineering with acquisition management knowledge and skills. The program is intended to broaden the technical capabilities of officers who may have non-technical backgrounds so they are able to manage and lead acquisition programs for the complex combat systems the DoD needs” (NPS, n.d.f). The MS-SEM also holds the WASC accreditation associated by all schools within NPS.



A. COA 1A: NPS MBA OR MS-SEM WITH CGSC OR SATELLITE ILE

This COA requires Army officers to attend NPS in order to obtain a graduate degree within either the Graduate School of Business and Public Policy (GSBPP) or the Department of Systems Engineering (see Figure 5). Students attend NPS for 18 months to complete their required graduate courses. They will complete a minimum of 90 credit hours in their core concentration and area of specialization, with the option to take additional electives not available to students completing the MEL-4 coursework offered by the Naval War College at NPS. While attending NPS, officers will receive DAU equivalency credit providing them with DAWIA Level III training certification in their primary career field, and under the Systems Engineering Management curriculum DAWIA Level III training in their alternate career field. An officer exercising this COA is either not promotable to major and is currently barred from entry into the NWC or has completed MEL-4 requirements prior to attending NPS.

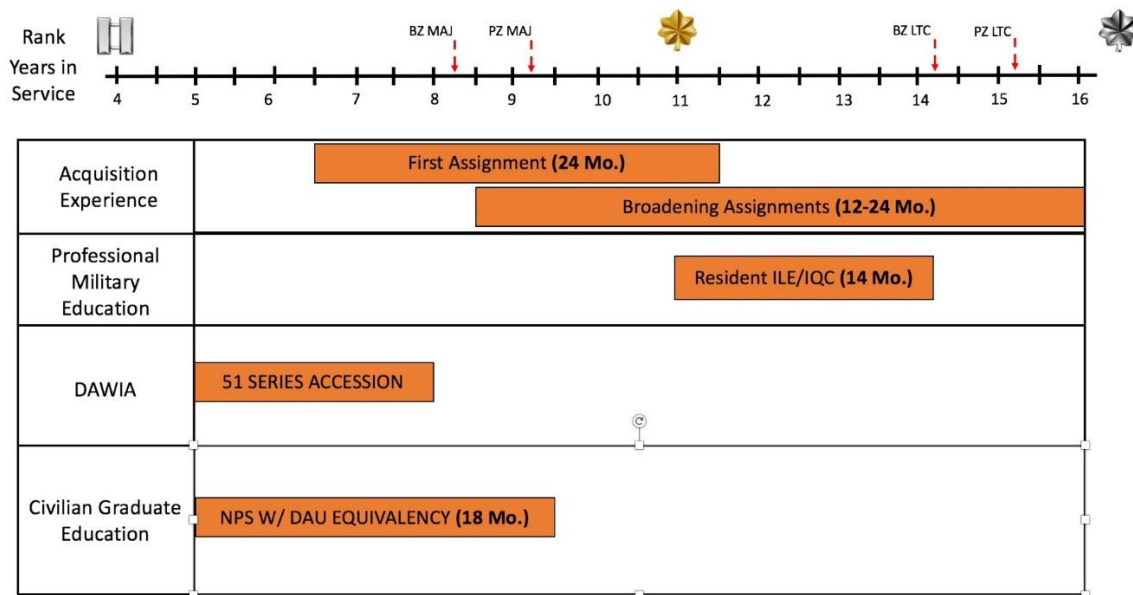


Figure 5. COA 1A Timeline: NPS MBA or MS-SEM with CGSC or Satellite ILE. Adapted from DA (2014).

COA 1A is distinguished from other COA 1 variants due to the MEL 4 completion at locations other than the NWC at NPS. Table 2 captures the SWOT elements of this COA to include the distinguishable benefits and drawbacks as follows:

The distinguishable benefits of this COA are as follows:

- Flexibility (individual): This COA allows students the most flexibility to pursue courses outside of the traditional concentration and specialization due to greater availability within the schedule. Electives outside of the core concentration or area of specialization broadens the mind, improves individual satisfaction, and can lead to greater individual innovation.
- Reduced information overload/burden: This COA lessens the information overload/burden placed on students during the 18-month opportunity by allowing them to graduate with the minimum course load of 97 hours. The reduced hours required to graduate allows students to better process and absorb the desired material, making it more likely they will retain long-term knowledge. This increases the value of the experience for both students and the organization at a later time.

The distinguishable drawbacks of this COA are as follows:

- Positional disruption (organizational & individual limitation): Completing MEL-4 requirements at a location and time apart from NPS disrupts the officers' acquisition positions and limits the officers' job experience during the available window leading up to LTC promotion. At a minimum, officers will complete MEL-4 at a satellite location for four months, either en route to a new location or during the middle of an assignment. If completed en route, the gaining organization operates without them for an additional four months, forcing the organization to operate understaffed during that time and disrupting the organization's processes once they arrive. If officers attend a satellite location during an assignment, it disrupts the organization's processes and staffing levels throughout their abrupt absence. Officers are also harmed by missing key milestones within the program and falling behind peers in both performance and development due to the absence. At a maximum, officers could incur an addition Permanent Change of Station (PCS) move to attend the 10-month resident course at Fort Leavenworth, KS. This year away from the acquisition force on top of 18 months at NPS can severely limit the number of performance evaluation reports completed and put officers at risk of being passed over for promotion to LTC and selection for a CSL product manager or contracting battalion command position. The additional PCS move to and from Fort Leavenworth, coupled with the limited time on station, brings significant stress to the family by disrupting children's schools and spouse's careers.



Table 2. COA 1A SWOT: NPS MBA or MS-SEM with CGSC or Satellite ILE.

<p><u>Strength:</u></p> <ul style="list-style-type: none"> • Builds joint understanding and joint relationships through the daily interaction with other DOD & International service members • Results in concentrated focus on PM or Contracting with an MBA or MS-SEM foundation • Provides LVL III certification in primary ACF and graduate degree completion • ACS officers perform better than non ACS (HRC Slides) 	<p><u>Weakness:</u></p> <ul style="list-style-type: none"> • Requires additional costly transitions between work position and educational institutions to complete MEL-4 • Disrupts family/ school dynamic due to winter PCS cycle • Reduces opportunities for work experience by being longest linear education timeline
<p><u>Opportunities:</u></p> <ul style="list-style-type: none"> • Allows for broader understanding of the Joint environment. • Balances competing education and position requirements • Allows singular commitment and focus to education and acquisition assignments 	<p><u>Threats:</u></p> <ul style="list-style-type: none"> • Disruptive to professional timeline to complete MEL-4 training when selected for JPME after grad school

B. COA 1B: NPS MBA WITH PRIMARY CAREER FIELD LEVEL III DAWIA TRAINING AND NAVAL WAR COLLEGE JPME

COA 1B is the traditional model for acquisition officers attending NPS. This COA requires Army officers to attend NPS in order to obtain an MBA from the GSBPP (see Figure 6). Students attend NPS for 18 months to complete their required graduate courses, which require completing a minimum of 108 or 110 (815/816 curriculums) credit hours in their core concentration and specialization area. While attending NPS, officers receive DAU equivalency credit for several course that are part of their core MBA concentration. The DAU equivalency credit provides officers with DAWIA Level III training certification in their primary career field. While completing their core MBA courses, officers attend the NWC JPME courses. The NWC JPME provides MEL-4 training to officers prior to graduation from NPS.

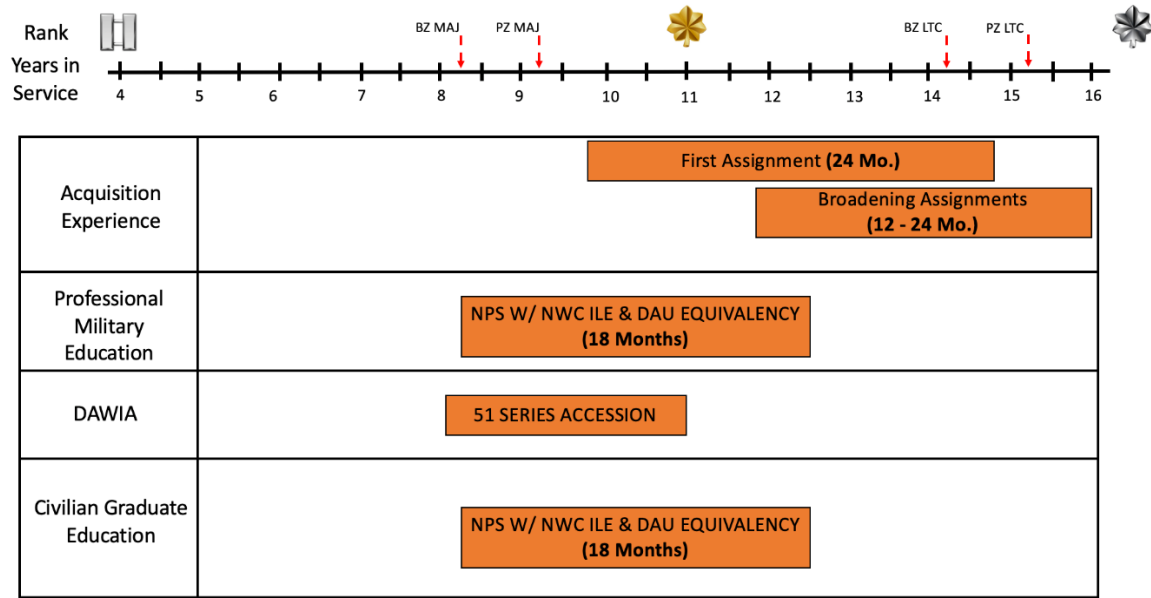


Figure 6. COA 1B Timeline: NPS MBA with Primary Career Field Level III DAWIA Training and Naval War College JPME. Adapted from DA (2014).

COA 1B is the traditional, or legacy, track for Army acquisition officers completing MBA, MEL-4, and DAWIA certification in a primary career field while attending NPS.

While pursuing an NPS MBA, officers receive instruction from faculty with a mix of DoD and industry work experience. This unique experience of the NPS faculty exposes students to the best practices and common pitfalls that relate specifically to their primary career field within acquisitions. The program requires students to complete a total of 108 credit hours over a period of six quarters, with an average of 18 credit hours per quarter. This results in students spending 18 hours per week in classroom study and two to three times that outside of class on independent or group study, for a total of 54–72 hours per week dedicated to their graduate degree. This results in a course overload that focuses on a singular career field while obtaining their MBA and MEL-4 training requirements. Table 3 captures the SWOT elements of this COA to include the distinguishable benefits and drawbacks as follows:

The distinguishable benefits of this COA are as follows:

- Educational depth (individual): Following the completion of the core business concentration, officers are immersed into their primary career field

specialty area. This immersion enables officers to demonstrate mastery in their primary career field, which is reinforced by their thesis work produced for graduation.

- **Strategic Thinking:** The core business concentration coursework required to earn an AACSB accredited MBA grounds officers in business fundamentals of accounting, economics, organizational leadership and management, and quantitative skills, such as operations management, statistics, and decision analysis. The primary goal of the MBA core curriculum is to teach students how to think and not what to think, which translates directly to the application of business case traceability to organizational strategic goals and requirements.

The distinguishable drawbacks of this COA are as follows:

- **Limited course work flexibility and overload:** A drawback to the 18-month NPS MBA is the lack of flexibility to obtain DAWIA Level III certification in an alternate career field. Students may be able to take additional courses to achieve Level II training with a slight increase to course load. However, the information overload required to achieve Level III training in an alternate career field will exceed the capabilities of most students and will significantly decrease the value and absorption of the education received. Furthermore, if a graduate of the legacy curriculum does pursue training in an alternate career field at a later date, it could reduce the effectiveness of the officer within his or her professional position while attempting to pursue the additional training.

Table 3. COA 1B SWOT: NPS MBA with Primary Career Field Level III DAWIA Training and Naval War College JPME

<p><u>Strength:</u></p> <ul style="list-style-type: none"> • Builds joint understanding and joint relationships through the daily interaction with other DOD & International service members • (816/815) Results in concentrated focus on PM or Contracting with an MBA foundation • Consolidates JPME in a joint environment with DAWIA LVL III certification in primary ACF and graduate degree completion • Grounded in Defense Acquisition • ACS officers perform better than non ACS (HRC Slides) 	<p><u>Weakness:</u></p> <ul style="list-style-type: none"> • Unable to exercise COA unless in Promotable to Major status • 18mo timeline allows for primary ACF and business foundation • Second longest Proposed COA to achieve LVL III certification. (reword) • Hinders certification in an alternate career field due to the possible limited time available to accomplish work experience requirements. • Disrupts family/ school dynamic due to winter PCS cycle
<p><u>Opportunities:</u></p> <ul style="list-style-type: none"> • Allows for broader understanding of the Joint environment. • Balances competing education and position requirements • Allows singular commitment and focus to education and acquisition assignments • ADSO commits officer to 4.5 years of service (financial benefit to Army) 	<p><u>Threats:</u></p> <ul style="list-style-type: none"> • 816/815 reduced technical training of alternate ACF which reduces # of qualified CSL billets • If serving in alternate ACF additional DAU training would be required reducing effectiveness in position (90% work / 10% education focus)



C. COA 1C: NPS MS-SEM WITH ACQUISITION AND CONTRACTING CAREER FIELD LEVEL III DAWIA TRAINING AND NAVAL WAR COLLEGE JPME

COA 1C requires Army officers to attend NPS in order to obtain a graduate degree from the Department of Systems Engineering (see Figure 7). Students attend NPS for 18 months to complete their required graduate courses, which require completing a minimum of 108 credit hours in their core concentration (Naval Postgraduate School, n.d.a). While attending NPS, officers will receive DAU equivalency credit for several courses that are part of their core Systems Engineering Management concentration. The DAU equivalency credit provides officers with DAWIA Level III training certification in their primary and alternate career field. While completing their graduate degree at NPS, officers attend the Naval War College (NWC) JPME courses. The NWC JPME provides MEL-4 training to officers prior to graduation from NPS.

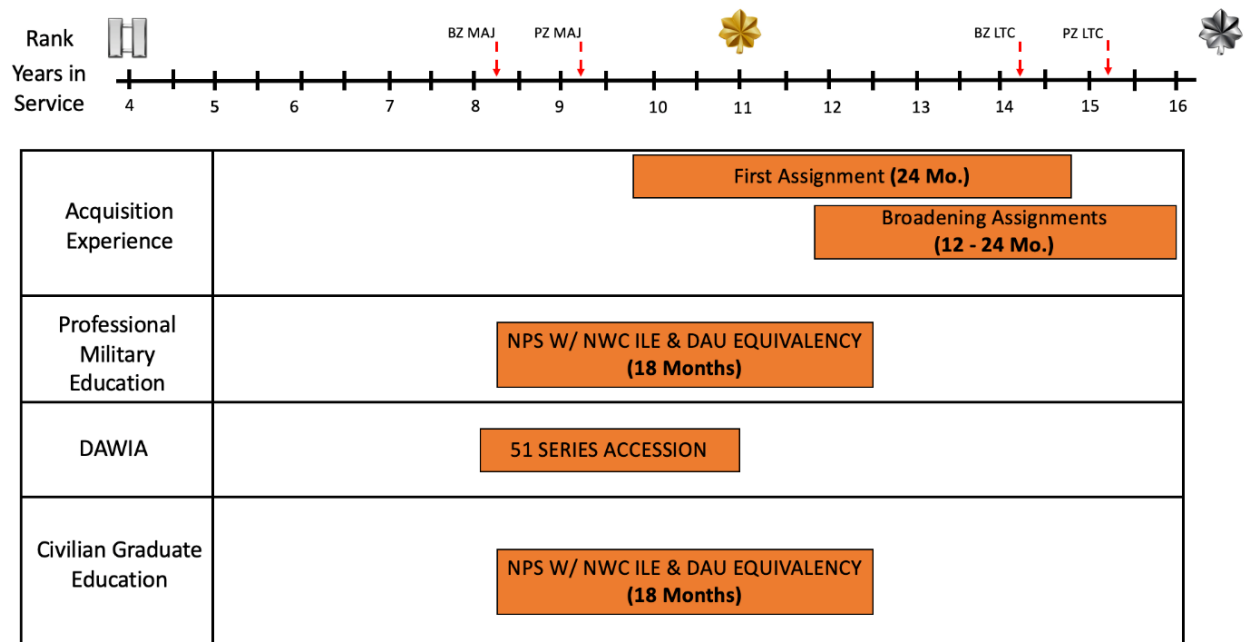


Figure 7. COA 1C Timeline: NPS MS-SEM with Acquisition and Contracting Career Field Level III DAWIA Training and Naval War College JPME. Adapted from DA (2014).

The MS-SEM, 522 program, is the new curriculum sponsored by the USAASOC. As a corporate sponsored program, it is tailored to meet the current needs and requirements of the sponsoring organization. Specifically, the program requires students to complete a total of 108 credit hours over a period of six quarters, with an average of 18 credit hours per quarter. This results in students spending 18 hours per week in classroom study and two to three times that outside of class on independent or group study, for a total of 54–72 hours per week dedicated to their graduate degree. This results in officers pursuing a course overload that focuses on a dual career field while obtaining their graduate degree and MEL-4 training requirements. Table 4 captures the SWOT elements of this COA to include the distinguishable benefits and drawbacks as follows:

The distinguishable benefits of this COA are as follows:

- Officers receive dual DAWIA level III certifications in Program Management and Contracting Management within 18 months.
- Officers receive technical instruction and focus in Systems Engineering integration while maintaining a specialty emphasis on program management and contracting management. This technical focus may provide officers more in-depth understanding of systems integration to better structure programs during early development.

The distinguishable drawbacks of this COA are as follows:

- Officers lose the broad business understanding and focus on strategic goals that is inherent in the MBA core concentration. While the systems engineer is focused on technical capability and trade-offs, the program manager and contracts manager must focus the entirety of the program: cost, schedule, and performance.
- The officer concentrates on technical aspects and understanding of Systems Engineering processes and events, which may translate more to a focus on short-term objectives rather than long-term integration and capability achievement. The systems engineering focus encourages students to overmanage system integration efforts at the risk of undermanaging other costs, schedule, performance, or risk elements of program and contract efforts.



Table 4. COA 1C SWOT: NPS MS-SEM with Acquisition and Contracting Career Field Level III DAWIA Training and Naval War College JPME

<p><u>Strength:</u></p> <ul style="list-style-type: none"> • Builds joint understanding and joint relationships through the daily interaction with other DOD & International service members • (522) Provides concentration to receive DAU education in PM and Contracting ACF with foundation in SE Mgmt • Consolidates JPME in a joint environment with DAWIA LVL III certification in dual ACFs and graduate degree completion • Grounded in Defense Acquisition • ACS officers perform better than non ACS (HRC Slides) 	<p><u>Weakness:</u></p> <ul style="list-style-type: none"> • Unable to exercise COA unless in Promotable to Major status • 18mo timeline allows for dual ACF training but lacking business acumen • Second longest Proposed COA to achieve LVL III certification. (reword) • Hinders certification in an alternate career field due to work experience requirements. • Disrupts family/ school dynamic due to winter PCS cycle
<p><u>Opportunities:</u></p> <ul style="list-style-type: none"> • Allows for broader understanding of the Joint environment. • Balances competing education and position requirements • Allows singular commitment and focus to education and acquisition assignments • ADSO commits officer to 4.5 years of service (financial benefit to Army) • Ability to fill both PM and Contracting billets prior to O-5 Promotion / CSL board 	<p><u>Threats:</u></p> <ul style="list-style-type: none"> • 522 reduced core implementation of business training and team integration • Changes in DAU course requirements may require additional training prior/post selection for alternate ACF to certify to appropriate DAWIA level following time in position.

D. COA 2: ACS WITH AAPC AND CGSC OR SATELLITE JPME

This COA requires Army officers to attend an approved Advanced Civil Schooling institution in a resident status in order to obtain a graduate degree (see Figure 8). Students attend ACS for 18 months to complete their required graduate courses. Following graduation, officers will attend the Army Acquisition Professionals Course (AAPC) at Huntsville, AL, in a TDY en route status. While attending AAPC, officers will receive DAU equivalency credit up to DAWIA Level II in Program Management and Level I credit in Contracting. Follow on DAU training will be required during the next 36 months to achieve Level III training in their primary career field. Separate from an ACS institution, officers will also have to attend Intermediate Level Education via resident coursework at Fort Leavenworth, KS, or a satellite course location to achieve MEL-4 completion.



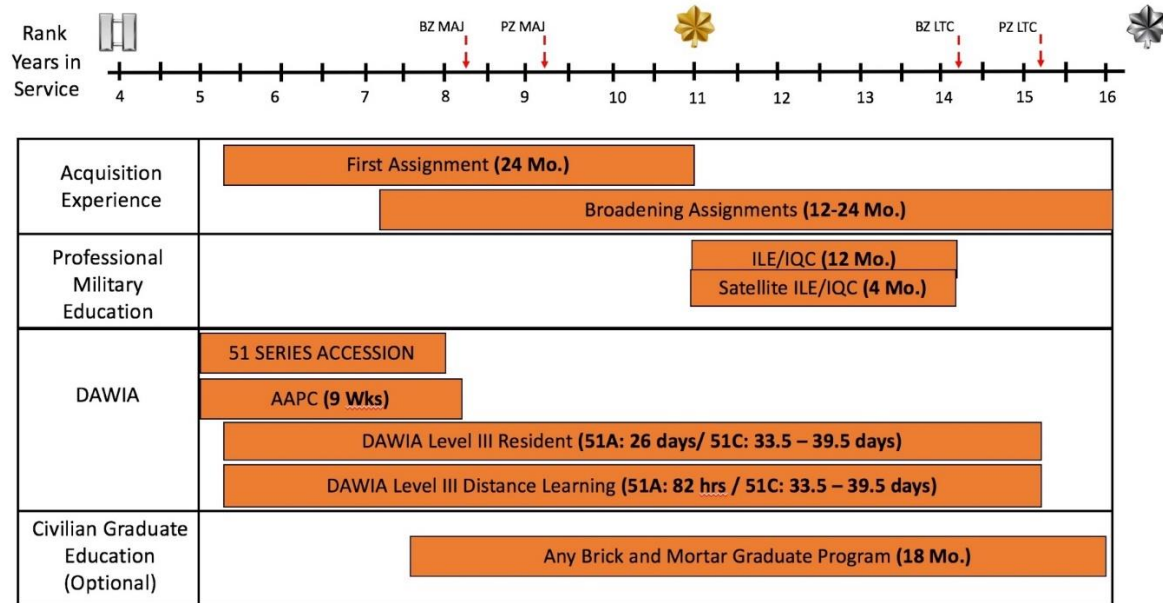


Figure 8. COA 2 Timeline: ACS with AAPC and CGSC or Satellite JPME.
Adapted from DA (2014).

Brooker et al. (2015) provided comprehensive analysis of COA 2. The key strengths of this COA are that it provides diversity of thought and experience to the acquisition workforce. Attending institutions outside of the defense industry broadens officers' understanding of industry and bridges the civil-military divide. It also allows officers to bring new business practices and perspectives to the Army acquisition model. Table 5 captures the SWOT elements of this COA to include the distinguishable benefits and drawbacks as follows:

The primary weakness of this COA is its inherent inefficiency. This COA requires several relocations and temporary duty assignments to complete all of the requirements for DAWIA training and military education. The distracting nature of seeking to fulfill these requirements while also trying to perform within the professional assignments puts officers and organizations at a disadvantage to peers and other organization with stable manning.

Table 5. COA 2 SWOT: ACS with AAPC and CGSC or Satellite JPME

<p><u>Strength:</u></p> <ul style="list-style-type: none"> • Shortest time commitment to achieve LVL III Certification, JPME/MEL IV, & AAC membership • Provides additional time to complete a nominative assignment, Training with Industry, or certification in an alternate ACF. 	<p><u>Weakness:</u></p> <ul style="list-style-type: none"> • Requires six months to complete LVL III Certification and JPME/MEL IV concurrent with acquisition assignment. • Distracts from assignment experience • Hinders program performance. • Minimum of three resident course TDY for LVL III • Minimum two TDY en route for AAPC & ILE • Prevents officer from pursuing Doctorate.
<p><u>Opportunities:</u></p> <ul style="list-style-type: none"> • Allows for broader understanding of the Army Acquisition Enterprise due to multiple assignments as an O-4 • Greatest opportunities of multiple professional reviews (OERs) 	<p><u>Threats:</u></p> <ul style="list-style-type: none"> • Hinders continuity and program contribution due to intermittent training requirements. • Less Job and Degree satisfaction with members • Reduced productivity due to pursuit of degree outside of professional commitments • Lacks depth in managerial competencies in areas of analysis, quantitative analysis and implementation of projects • Lack of grad degree may negatively impact O-5 and CSL selection

E. COA 3: TUITION ASSISTANCE WITH AAPC AND CGSC OR SATELLITE JPME

This COA requires Army officers to obtain a graduate degree from an accredited institution funded through a mixture of tuition assistance (TA) and personal funding (see Figure 9). This education track can be completed through a mixture of resident and online courses; however, degree completion while working typically extends the time required to complete a degree to 2.5 years. Officers concurrently attend the Army Acquisition Professionals Course at Huntsville, AL, in a TDY en route status prior to their first acquisition assignment. While attending AAPC, officers will receive DAU equivalency credit up to DAWIA Level II in Program Management and Level I credit in Contracting. Follow on DAU training will be required during the next 36 months to achieve Level III training in their primary career field. Additionally, officers will have to attend Intermediate Level Education via resident coursework at Fort Leavenworth, KS, or a satellite course to achieve MEL-4 completion.

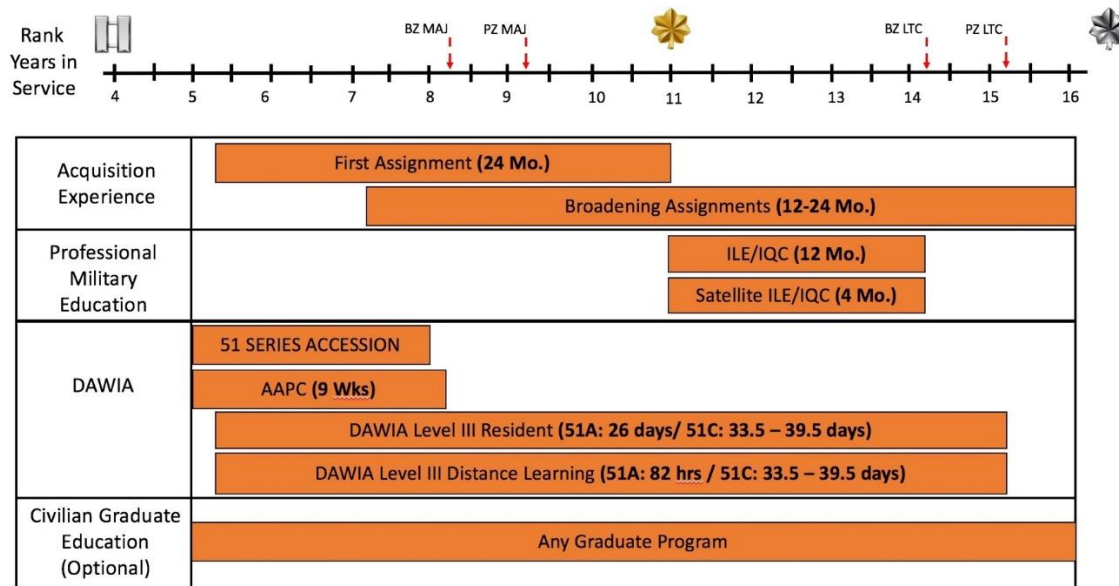


Figure 9. COA 3 Timeline: Tuition Assistance with AAPC and CGSC or Satellite JPME. Adapted from DA (2014).

Brooker et al. (2015) provided comprehensive analysis of COA 3. The key strength of this COA is its extensive professional experience. This COA provides the most on-the-job experience of the COAs considered. Though officers face distractions and must juggle the educational requirements with personal and professional commitments, they are afforded the most time to conduct key development, broadening, and nominative assignments within the window before the LTC promotion board. Table 6 captures the SWOT elements of this COA to include the distinguishable benefits and drawbacks as follows:

The significant weaknesses of this COA is inefficiency and lack of experience outside of the acquisition career field. This COA requires frequent relocations and temporary duty assignments to accomplish the DAWIA and professional military education requirements. While challenging officers through multiple acquisition positions, it denies them the opportunity to expand their understanding and knowledge through different experience and immersion.

Table 6. COA 3 SWOT: Tuition Assistance with AAPC and CGSC or Satellite JPME

<p><u>Strength:</u></p> <ul style="list-style-type: none"> • Shortest time commitment to achieve LVL III Certification, JPME/MEL IV, & AAC membership • Provides additional time to complete a nominative assignment, Training with Industry, or certification in an alternate ACF. 	<p><u>Weakness:</u></p> <ul style="list-style-type: none"> • Requires six months to complete LVL III Certification and JPME/MEL IV concurrent with acquisition assignment. • Distracts from assignment experience • Hinders program performance. • Minimum of three resident course TDY for LVL III • Minimum two TDY en route for AAPC & ILE • Prevents officer from pursuing Doctorate.
<p><u>Opportunities:</u></p> <ul style="list-style-type: none"> • Allows for broader understanding of the Army Acquisition Enterprise due to multiple assignments as an O-4 • Greatest opportunities of multiple professional reviews (OERs) 	<p><u>Threats:</u></p> <ul style="list-style-type: none"> • Hinders continuity and program contribution due to intermittent training requirements. • Less Job and Degree satisfaction with members • Reduced productivity due to pursuit of degree outside of professional commitments • Lacks depth in managerial competencies in areas of analysis, quantitative analysis and implementation of projects • Lack of grad degree may negatively impact O-5 and CSL selection

Each of the COAs and timelines presented are feasible, suitable, acceptable, and complete. The unique characteristics that comprise each COA are highlighted in the SWOT provided in each section. Consolidating the SWOT elements into a small set of common characteristics yields four primary elements: Talent Management, Educational Value, Information Loading, and Financial Burden. The benefits and drawbacks of the SWOTs in this section are the basis for the COA comparison in Chapter V.

V. COURSES OF ACTION ANALYSIS

The COAs presented thus far represent the current potential pathways an acquisition officer may use to complete the three pillars of acquisition professional development prior to the lieutenant colonel promotion and CSL boards. This chapter contains an analysis of the characteristic primary elements identified and presented in Chapter IV. Decomposing the characteristics of each COA provides the means to conduct a comparative analysis that provides common measures of the merit and value of each COA. The purpose of this analysis is to identify an optimal career path for Army acquisition officers; conclusions of this analysis are presented in Chapter VI.

A. TALENT MANAGEMENT

The Army Talent Management Strategy consists of a vision to optimize human performance by cultivating the unique talents of its workforce. This research aligns with this vision and strives to support the “develop” objective of ATMS and its three supporting objectives of educate, train, and career manage (M&RA, 2016). This research also helps to reinforce the “retain” objective within the ATMS. Figure 10 captures the AAW talent management (TM) model. As the TM model shows, the goal of talent management is to build qualified professional strategic leaders able to guide critical acquisition programs and offices through the effective use and employment of lessons learned from functional experiences, professional education, and statutory requirements.



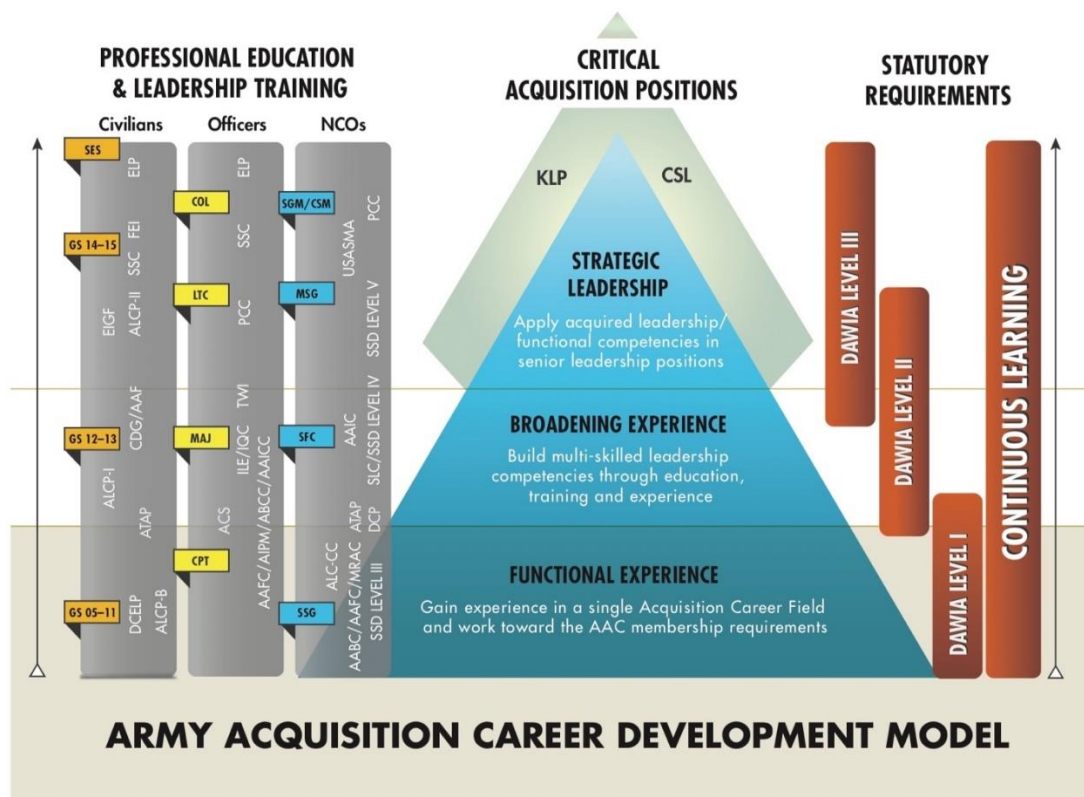


Figure 10. Army Acquisition Talent Management Model. Source: ASC (2015, p. 8).

As noted previously, developing talent management within the workforce is just one of four objectives of the Army talent management strategy. The other objectives are to acquire, employ, and retain talent. Significantly, the successful employment of each of these objectives supports the successful accomplishment of the other objectives. This research has found that the successful application of the development objective, primarily through graduate education, leads to improved retention (U.S. Army Talent Management, 2015).

COAs 1A–1C share several common beneficial traits that build upon the talent management enhancement of an acquisition officer. Attending NPS broadens officers' understanding of the joint environment and service cultures. NPS students develop personal and professional relationships with their joint DoD service members and international service student partners. Exposing acquisition officers to the acquisition successes and failures of sister services provides insight into alternative ways and methods

to navigate future contracts and programs within the DoD acquisition process. It is also noted that mandatory curriculum courses related to defense acquisition are taught by former acquisition professionals and practitioners who can pass on relevant knowledge to the students based on their personal experiences.

These three COAs also share a common 18-month timeline for the student to attend NPS. This timeline makes it necessary for an officer to make at least one winter cycle move. Winter cycle moves are disruptive to those with school-age children and working spouses. The winter PCS cycle occurs from October to March. School-age dependents and their families are forced to coordinate their move and transfer between schools often during a two- to three-week break. The school transfer coincides with a physical relocation during the same two- to three-week period and across more than half of the country to minimize the disruption to the family. The Bipartisan Policy Center concluded, “An assignment in a location that jeopardizes the ability of a service member’s spouse to maintain employment, or the timing of a move could adversely affect the needs of a service member’s child are tolerable if required by the mission, but when these decisions seem arbitrary and unrelated to necessity, they only serve to encourage talented service members to separate earlier than planned” (Bipartisan Policy Center Task Force on Defense Personnel, 2017, p. 19). Unfortunately, the winter movement cycle is a self-induced constraint by the institution applying a uniform standard to the force rather than analyzing and balancing the requirements of the force with the officers’ timeline.

The winter move cycle also constrains organizational manning due to the lack of openings during the winter move cycle compared to the summer move cycle. The FY 19–01 winter movement cycle contained 85 PM and Contracting Positions, of which eight were Key Development positions for program management and 18 were Contracting KD positions (AMB, n.d.c). Conversely, the FY 18–02 summer movement cycle contained 261 total program management and contracting positions, of which 44 were KD for PM and 34 were KD for contracting (AMB, n.d.b). As the numbers show, there are greater numbers of openings during the summer, providing greater opportunity to successfully synchronize the practice of talent management with the goals of talent management by matching the right officer to the right position, at the right time.



B. INFORMATION/COGNITIVE LOADING

There are many unique characteristics of the COAs presented in Chapter IV that separate one from another. One characteristic identified is information or cognitive loading. NPS academic policy 6.5, regarding course enrollment limitations, sets the criteria for students to enter into a course overload status. The policy states that student enrollment limitations are any amount greater than 17 total credit hours, or more than four 3000-level and 4000-level courses per quarter (NPS, 2018). While the purpose is not directly stated, the rationale is that an average student faces information overload with a course load greater than 17 credits or four senior-level courses. Furthermore, NPS academic policy 6.1.3, regarding credit hours, states that each credit hour should require a minimum of “one hour of classroom instruction and two hours of out-of-class student work per week” (NPS, 2018, p. 19). This implies that a student taking 17 total credits per quarter should be dedicating a minimum of 51 hours per week to graduate studies, and with any more time, they are at risk of information overload.³ While a maximum number of out-of-class hours is not stipulated in the student policy, it is standard practice for instructors to state between two and three hours are required for each class credit. This implies the student must afford anywhere between 51 and 68 hours of study per week for a 17-credit quarter.

The 522, 815, and 816 curriculums require an average of 18 credit hours per quarter for students who are enrolled to attend JPME during their 18-month degree program. This places students into a continual course overload status, which puts them at great risk of cognitive overload, thereby reducing the benefit to the individual and weakening the impact their education may yield within the offices they are intended to serve. The proposed 24-month curriculum requires an average of 16 credit hours per quarter for students who also complete JPME during their degree program. The reduced credit hours should result in a greater mastery of the materials, providing greater benefit to the Army as well as a less stressful and more rewarding experience for officers.

³ NPS credit hour policy: A 17-credit quarter with four classes requires a minimum of 17 classroom hours per week in addition to 34 out-of-class hours, for a total of 51 minimum hours dedicated to study per week. When extrapolated, a 16-credit quarter requires 48–64 hours of study per week, while an 18-credit quarter requires 54–72 hours per week.



C. EDUCATIONAL VALUE

Additionally, the degree type and educational focus vary throughout the COAs. Gaining an advanced business management degree is a significant opportunity and of great value to not only the individual, but also to the organizations in which they work and society as a whole. According to the AACSB, a graduate education in management leads to enhanced business productivity. Students of management programs learn methods to “improve decision-making processes and quantitative methods” (AACSB, 2005, p. 8).

Atul Gupta and Sara E. Bennett (2013) conducted an empirical analysis of the effects of an MBA on organizational effectiveness. Their analysis identified four sources of capital that build hard and soft managerial skills that produce quantifiable gains within the organizations. Applying this analysis to defense acquisition, it can be assumed that graduate-level business education establishes improved conditions for program performance and contract management. These improvements would be credited to the social, administrative, ingenious, and logical capital of those officers with a business degree.

D. FINANCIAL BENEFIT

The quantifiable cost data for COA 1 A-C, COA 2, and COA 3 come from the research conducted by Brooker et al. (2015). The qualitative data contained within the SWOT analysis for each COA variation is based upon conclusions drawn from reports and articles, where possible, as well as professional judgment. Figure 11 displays an update to typical assumptions of Brooker et al. Specifically, each COA within Figure 11 shows the time commitments to complete NPS or graduate education, DAU requirements, and military education requirements, along with the Active Duty Service Obligation incurred through each of the options. The timeline begins in year 8 of an officer’s career, which is the typical point of entry for officers pursuing graduate school education.



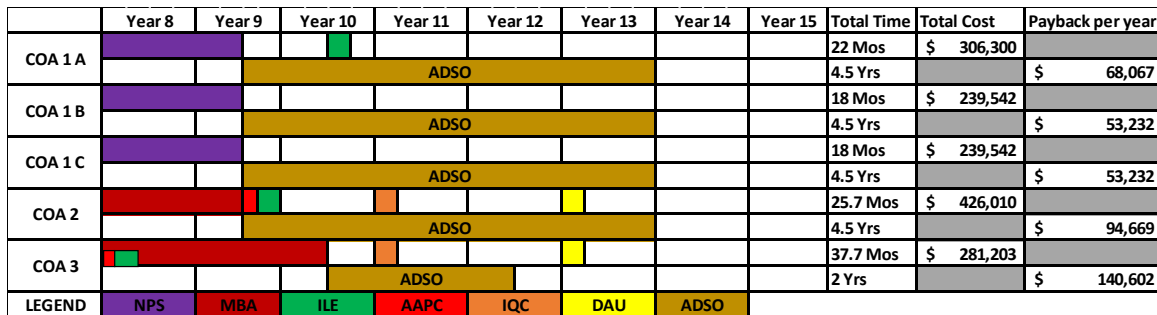


Figure 11. Typical Timeline to Achieve Each Course of Action. Adapted from Brooker et al. (2015).

E. EVALUATION CRITERIA

The characteristics by which the COAs can be evaluated consist of four primary elements: talent management, educational value, information loading, and financial burden. By assigning a weight to each of these elements, a matrix can be developed that measures each COA based on individual SWOT assessments. The weighting criteria are designed to add to a total of 100%, or 1.0. The weighting of the talent management element is assessed as the highest, at a weighting of 0.5. Talent management received this position of importance because it is the means to provide the person borne capability required to satisfy the Army mission. Talent management aligns individual capability with the Army's strategic goals while "optimizing human performance and cultivating the unique talents of every individual" (M&RA, 2016, p. 3).

Educational value is important to assess when evaluating the benefits of graduate studies from the ACS program. Officers within acquisition career fields are expected to manage complex programs and contracts. Acquisition career fields are tailored to the business-oriented operating environment that acquisition officers are assigned to work within. It is beneficial to the Army for acquisition officers to gain graduate education within a field of study that directly relates to their assigned business-oriented acquisition career field. The degree to which each COA provides value to the acquisition career fields of an officer scored the third highest, at 0.15.

Information overloading has negative effects on not only individual officers, but also organizations. Each of the COAs requires approximately 18 credit hours per quarter over 18 months. When assessing the COAs on a quarter-to-quarter basis, it can be noted

that the cognitive burden on the officer varies (see Figure 12). Variations in the information overload data impact the resulting scores of each COA. Based on the average of 18 credit hours per quarter, a weekly course load scale was developed to show the typical amount of time a student would have to commit to each week of courses during an average quarter (see Figure 13). Information overloading is assigned the lowest weighted score of 0.1.

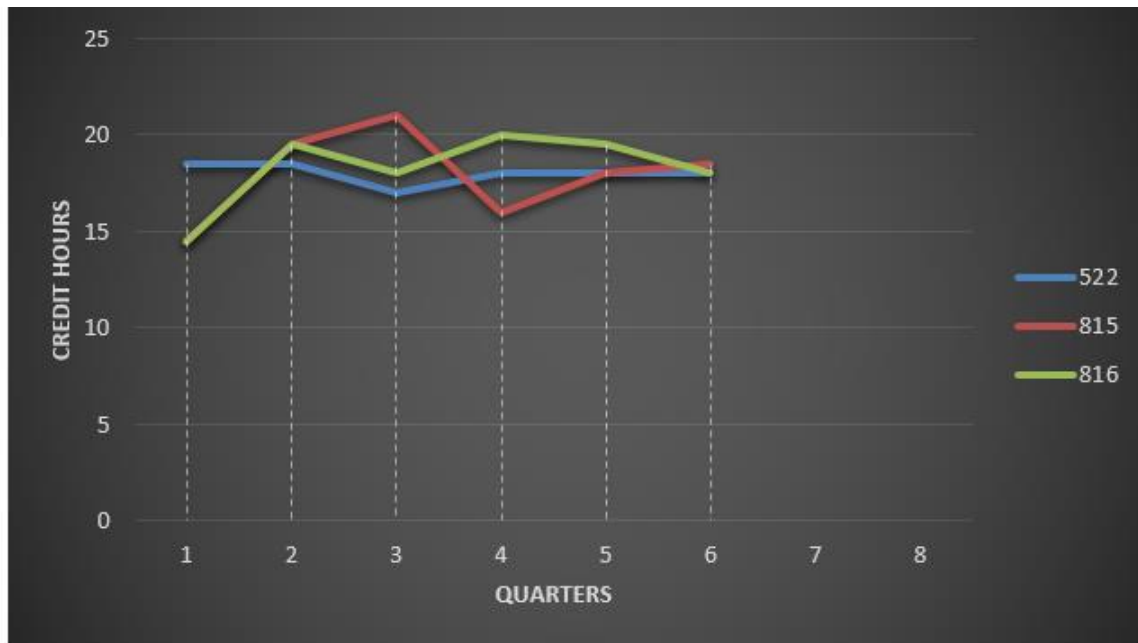


Figure 12. Quarterly credit hour variation of NPS 522, 815, and 816 curriculums.

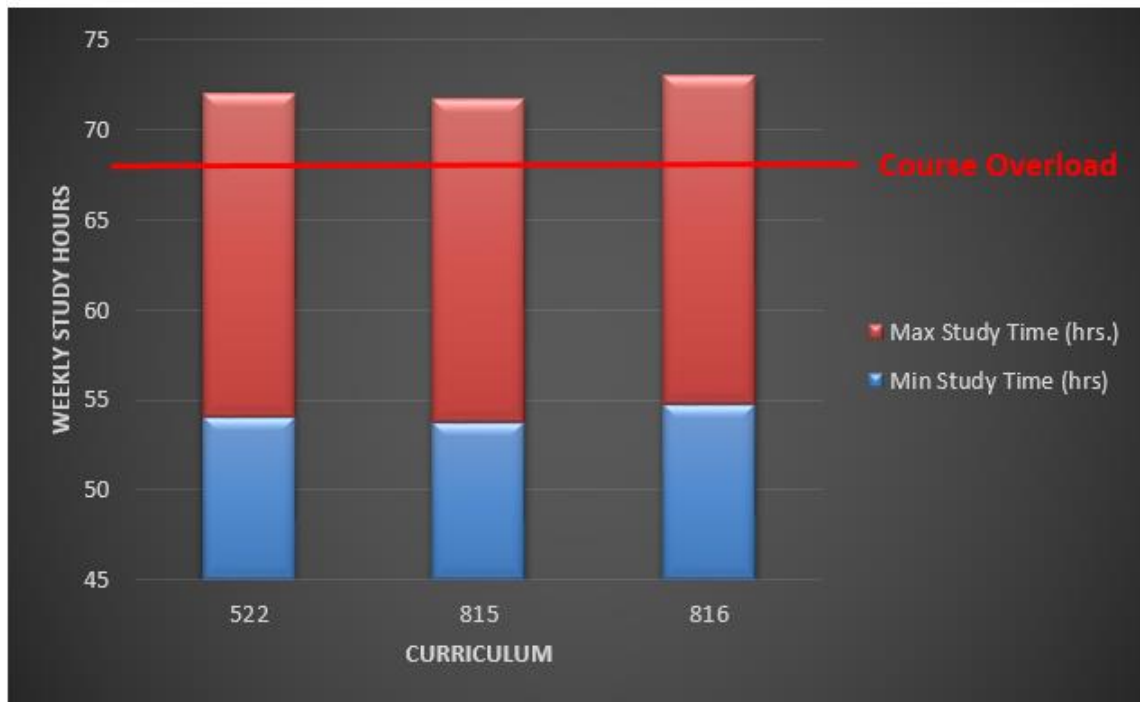


Figure 13. NPS Curriculum Average Weekly Study Load. Adapted from NPS Academic Office (2018).

The final characteristic element to assess is financial burden. The financial cost of each COA is useful to gauge to understand the net financial benefits gained by the Army when an officer attends graduate studies. COA 1B and 1C require the same financial costs, while 1A differs from the two. The assessment of each COA is performed by measuring the costs against the benefits gained. This characteristic is assigned the second-highest weighted score of 0.25, as payback to the Army is a significant aspect of funding an ACS student.

F. SCORING

For each of the four elements, the COAs receive a score from 1 to 4 based on the perceived benefit provided to each characteristic—a score of 4 being an optimal result, and 1 being undesirable. A score of 1 corresponds to a characteristic not achieving the desired professional development goals for the Army and the officer. A score of 2 corresponds to a characteristic marginally achieving the desired professional development goals for the Army and the officer. A score of 3 corresponds to a characteristic substantially achieving

the professional development goals for the Army and the officer. A score of 4 corresponds to a characteristic completely achieving the professional development goals for the Army and the officer.

1. COA 1A: NPS MBA or MS-SEM with CGSC or Satellite ILE

(1) Talent Management

- This COA is the most disruptive due to multiple moves for officers to complete graduate education and MEL-4 requirements. Additionally, the officer is still required to complete 18 months of graduate school. COA 1A receives a talent management score of 2 due to its marginal achievements.

(2) Educational Value

- This COA provides students the flexibility to receive an MBA or MS-SEM. Additionally, officers selected to attend resident CGSC are afforded the opportunity to attend additional studies if desired and approved. COA 1A receives an educational value score of 3 due to its substantial achievements.

(3) Information Overload Value

- This COA separates MEL-4 professional military education from graduate school. This results in the lowest level of information overload for any of the COAs. COA 1A receives an information overload value score of 3 due to its substantial achievements.

(4) Financial Benefit

- This COA has the greatest financial burden for the Army amongst all three COAs. Officers must make multiple PCS or TDY moves to satisfy graduate education and MEL-4 requirements over an extended period of time. COA 1A receives a financial benefit score of 1 due to its lack of achievement.

2. COA 1B: NPS MBA with Primary Career Field Level III DAWIA Training and Naval War College JPME

(1) Talent Management

- This COA grounds officers in their primary career field of study while also providing the officer their MEL-4 requirements. COA 1B is as efficient as COA 1C with respect to moves for officers and the corresponding burden placed on their households. COA 1B receives a talent management score of 3 due to its substantial achievement.



(2) Educational Value

- This COA allows officers to focus on broader business strategy studies and applications that relate to their assigned career field. This is a recommended alternative to COA 1C. COA 1B receives an educational value score of 3 due to its substantial achievements.

(3) Information Overload Value

- This COA achieves a better score than COA 1C due to the dynamic changes in course load throughout the period the officer attends NPS. COA 1B results in officers experiencing information overload during their entire course of study. It is preferred to ramp down over the course of the curriculum plan to meet graduation and PCS needs of each officer. COA 1B receives an information overload value score of 2 due to its marginal achievements.

(4) Financial Benefit

- This COA matches COA 1C. COA 1B requires the same financial commitment of the Army and buyback through the ADSO. COA 1B receives a score of 2 due to its marginal financial benefit achievement.

3. COA 1C: NPS MS-SEM with Acquisition and Contracting Career Field Level III DAWIA Training and Naval War College JPME

(1) Talent Management

- This COA provides training within dual career fields to meet Army and acquisition talent management goals. This enables pursuit of either career field upon graduation and postures officers to be competitive in either career field if job experience is aligned after graduation with an 18-month degree. COA 1C receives a talent management score of 3 due to its substantial achievement.

(2) Educational Value

- This COA receives the lowest score due to the training focus for DAWIA certification. This certification focus is achieved with the opportunity cost of a focus on strategic business management studies that have relevant application to the acquisitions operating environment. COA 1C receives an educational value score of 2 due to its marginal achievements.

(3) Information Overload Value

- This COA achieves the lowest score due to the lack of a reduction in course load throughout the period the officer attends NPS. It is preferred to ramp



down over the course of the curriculum plan to meet graduation and PCS needs of each officer. This COA results in officers experiencing information overload during their entire course of study. COA 1C receives an information overload value score of 2 due to its marginal achievements.

(4) Financial Benefit Score = 5

- This COA matches COA 1B from a financial burden standpoint. COA 1C receives a score of 2 due to its marginal financial benefit achievement.

G. SCORE RESULTS

The results of this weighted assessment can be seen in Table 7. COA 1B presents the best value in terms of providing the greatest value to Acquisition officers and the Army. Additionally, it is identified that the potential exists to develop an improved educational path. This path is presented as a recommendation for implementation in Chapter VI, which also concludes the analysis and provides recommendations for future study.

Table 7. Weighted analysis of COAs

Characteristic Elements of COAs	COA 1A	COA 1B	COA 1C	Weight
Talent Management	2	3	3	0.5
Educational Value	3	3	2	0.1
Information Loading	3	2	2	0.15
Financial Benefit	1	2	2	0.25
	2	2.6	2.5	1

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VI. RECOMMENDATION AND CONCLUSION

A. RECOMMENDATION

Based upon the weighted comparison and assessment of the COA elements in Chapter V, COA 1D has been developed. COA 1D provides a tailored career path to capitalize on the benefits provided by NPS to educate and train acquisition officers. Using the Graduate School of Business and Public Policy (GSBPP), officers are grounded in standard business practices and strategic management to best posture future Army acquisition programs for life cycle success, while also receiving MEL -4 education from the Naval War College at NPS. Additionally, officers receive DAWIA-mandated training for program management and contracting management from defense acquisition professionals and practitioners. However, the most distinguishing element of this course of action is the value it provides to the acquisition officer and the Acquisition Corps.

COA 1D: NPS MBA with Acquisition and Contracting Career Field Level III DAWIA Training and Naval War College JPME Option

This COA requires Army officers to attend NPS in order to obtain an MBA from the GSBPP (see Figure 14). Students attend NPS for 24 months to complete their required graduate courses, which require completing a minimum of 129.5 credit hours in their core concentration and specialization areas. While attending NPS, officers receive DAU equivalency credit for several courses that are part of their core MBA concentration. The DAU equivalency credit provides an officer with DAWIA Level III training certification in both primary and alternate career fields.



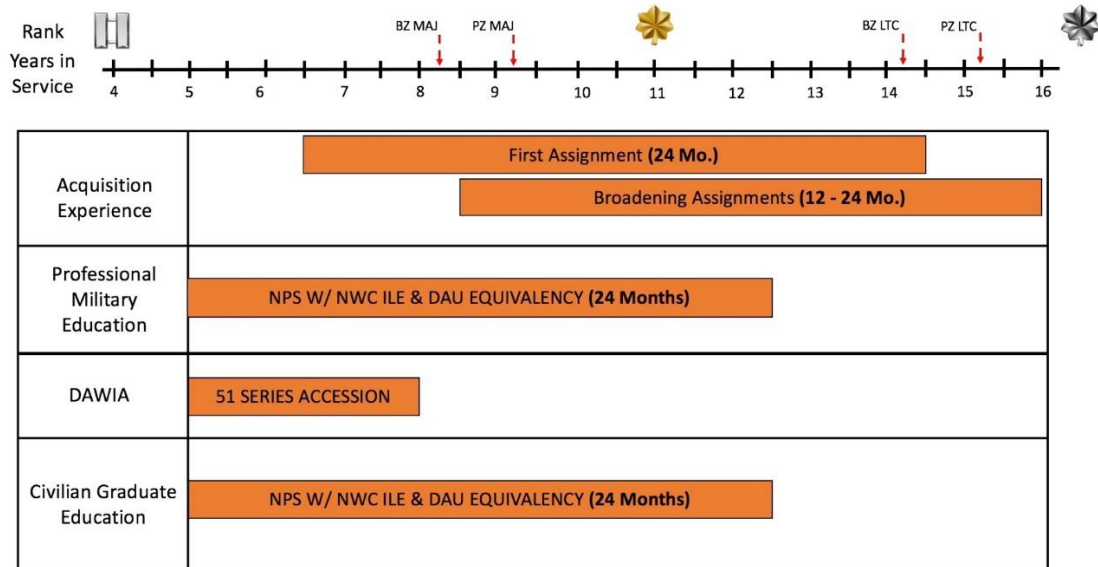


Figure 14. COA 1D Timeline: NPS MBA or MS-SEM with Acquisition and Contracting Career Field Level III DAWIA Training and Naval War College JPME. Adapted from DA (2014).

The program requires students to complete a total of 129.5 credit hours over the period of 8 quarters, with an average of 16 credit hours per quarter. This results in students spending 16 hours per week in classroom study and 2–3 times that outside of class on independent or group study, for a total of 48–64 hours per week dedicated to their graduate degree. This results in officers pursuing a balanced course load that focuses on a dual career field while obtaining their MBA and MEL-4 training requirements.

While completing their core MBA courses, officers attend the NWC JPME courses. The NWC JPME provides MEL-4 training to officers prior to graduation from NPS. This COA also proposes that MEL-4 training be made available to officers who are attending NPS prior to the promotion window for Major to maximize their education opportunity. This will ensure officers are not required to make a PCS move for CGSC or travel TDY to complete satellite JPME and forfeit valuable focus on their acquisition assignments at the expense of maintaining the education focus.

One of the unique strengths that separates COA 1D from all other COA 1 alternatives is the improved education and social balance for officers and their family. COA 1D provides a more manageable course load over an extended period of time. The more

manageable course load provides opportunities for officers to gain greater familiarity with course material and to better absorb material into their long-term memory, enabling a more valuable graduate experience for individuals and the acquisition community. COA 1D enables a summer PCS cycle to begin studies at NPS, as well as following graduation from NPS. This can provide enhanced job opportunities for spouses and reduces transitional challenges for school-age children.

Table 8. COA 1D SWOT: NPS MBA or MS-SEM with Acquisition and Contracting Career Field Level III DAWIA Training and Naval War College JPME

<p><u>Strength:</u></p> <ul style="list-style-type: none"> • Grounded in Defense Acquisition • Builds joint understanding and joint relationships through the daily interaction with other DOD & International service members • Improved school life balance to foster enhanced comprehension of information obtained • Normalizes moving cycles within summer PCSs • Minimizes disruption to family pattern of life and children's education • Improves work opportunities for spouses • Consolidates JPME in a joint environment with DAWIA LVL III certification in dual ACFs and graduate degree completion • ACS officers perform better than non ACS (HRC Slides) 	<p><u>Weakness:</u></p> <ul style="list-style-type: none"> • Greatest length of time • Greatest up front cost • Lowest availability for multiple job experiences prior to O-5/CSL boards
<p><u>Opportunities:</u></p> <ul style="list-style-type: none"> • Increased ADSO at 5 years (Financial productivity benefit to Army) • Higher retention rate of more talented pool of officers for O-5 CSL selection • Option to incorporate internship with PEO/ACCs or industry to apply grad ed to advance host org interests • Integrate MBA projects with PEO/ACC offices to solve/support immediate and relevant issues. • Greatest payback to the the Army • Ability to fill both PM and Contracting billets prior to O-5 Promotion / CSL board 	<p><u>Threats:</u></p> <ul style="list-style-type: none"> • Changes in DAU course requirements may require additional training prior/post selection for alternate ACF to certify to appropriate DAWIA level following time in position.

B. CONCLUSION

COA 1D provides best value for officers through a balanced course load, family stabilization, and maximizing short-term and long-term position availability. COA 1D enables officers to earn an MBA while also earning Level III Program Management and Contracting equivalency and maintaining a course load of 16 credits per quarter (see Figure 15). The reduced course load allows better study and absorption of the material to benefit the organization and the acquisition enterprise later through better decision-making, critical analysis, and traceability to strategic objectives (see Figure 16). A 24-month program stabilizes child education and spousal employment and reduces stress on officers and families,



which tangibly supports retention efforts later in officers' career. Lastly, COA 1D maximizes short-term and long-term positional availability by aligning officers and their talents with the larger number of positions available within the summer movement cycle (short-term), and later enables officers to fulfill positions within the two primary acquisition career fields, which increases the field of qualified candidates for Command Selection Billets.

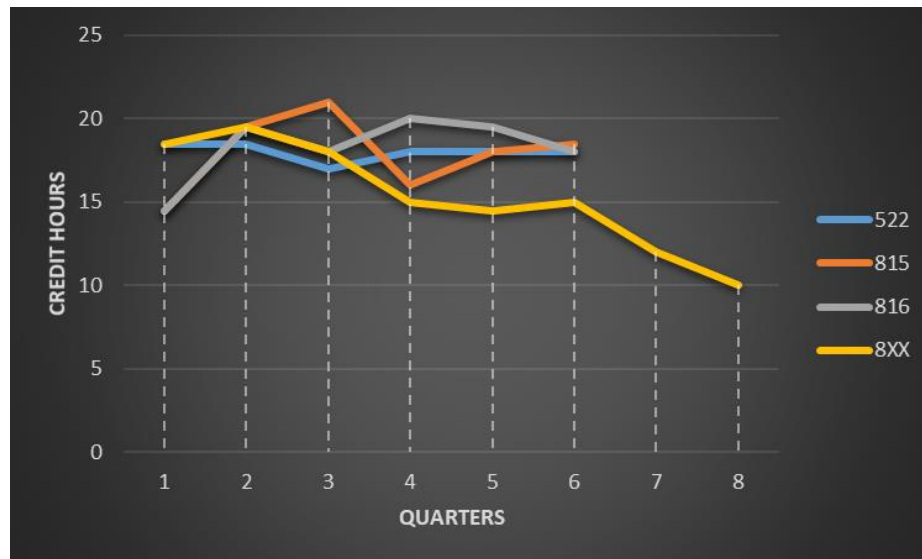


Figure 15. NPS Curriculum Course Load by Quarter. Adapted from NPS Academic Office (2018).

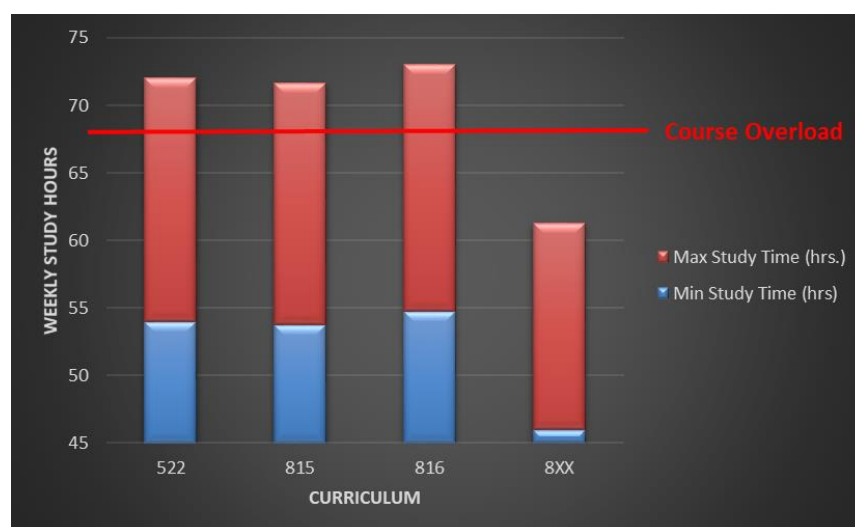


Figure 16. NPS Curriculum Average Weekly Study Load. Adapted from NPS Academic Office (2018).

Extending officers' time at NPS an additional six months while raising the cost, also extends the ADSO by an additional year and a half, for a total ADSO of six years. This extension results in a payback of \$55,242, which is still lower than the alternative courses of action considered by Brooker et al. (2015) (see Table 9).

Table 9. Typical Timeline to Achieve Each Course of Action. Adapted from Brooker et al. (2015).

	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Total Time	Total Cost	Payback per year
COA 1 A									22 Mos	\$ 306,300	
									4.5 Yrs	\$ 68,067	
COA 1 B & C									18 Mos	\$ 239,542	
									4.5 Yrs	\$ 53,232	
COA 1 D									24 Mos	\$ 316,292	
									6 Yrs	\$ 52,715	
COA 2									25.7 Mos	\$ 426,010	
									4.5 Yrs	\$ 94,669	
COA 3									37.7 Mos	\$ 281,203	
									2 Yrs	\$ 140,602	
LEGEND	NPS	MBA	ILE	AAPC	IQC	DAU	ADSO				

This extension of the ADSO becomes more relevant as the full impact of the Blended Retirement System (BRS) comes to bear on retention. LTG Thomas Seamands, deputy chief of staff, G-1, testified to the House Armed Services Committee that the BRS “will be a significant indicator on retention in the out years” (Jowers, 2018). He anticipated a 7–10-year lag from the initiation of the BRS before the Army identifies a reduction in retention. Therefore, he stressed a need to be prepared should the shortfall appear. In the same hearing, Representative Don Bacon from Nebraska admitted his belief “that service members will get out at the 17-year mark” after the service members have realized the lump-sum continuation payment at the 12-year service mark (Jowers, 2018).

The issue of mid-career retention numbers is not a new issue for the Army. As recently as 2010, the Army faced a crisis in field grade leadership. Similar to the BRS continuation pay, the Army chose to provide an incentive pay to certain year groups and MOS that were experiencing shortfalls. In 2010 the U.S. Army Talent Management Taskforce conducted an interview with LTG Buster Hagenbeck, the superintendent of the United States Military Academy and former deputy chief of staff, G1. During the interview, LTG Hagenbeck revealed that the retention bonus failed to change the minds of officers who were intending to exit the service or to incentivize undecided officers to stay in the

Army (U.S. Army Talent Management, 2015). Exit surveys found that individuals who were already committed to staying in the Army stayed, and individuals who had decided to leave, left. So rather than resulting in higher retention or retaining individuals who were yet undecided, the Army increased its personnel cost by \$500 million (U.S. Army Talent Management, 2015).

This COA does require an additional six-month educational commitment in addition to the traditional 18 months provided by the Army's ACS program (K. Hassan, email to author, October 3, 2018). This additional six-month period comes at an opportunity cost of reduced on-the-job experience within an ACF. The costs in lost experience are negated by the increased long-term benefits to the Army. Extrapolating the data provided by Brooker et al. (2015) reveals a payback to the Army of \$52,716–\$55,242 (depending on the officer's rank) per year of ADSO.⁴

In addition to the financial payback, the Army may see greater retention periods for their acquisition officers. This benefit may become of critical importance within the next decade due to impacts of the new BRS. Under the current High 3 retirement system, the majority of acquisition officers seek to acquire a minimum of 20 years of service to earn a pension (DoD, n.d.). This results in a commitment that provides a large pool of skilled field grade officers to compete for O-5 CSL positions. However, the BRS enables an officer to maximize their retirement earnings by year 17 in addition to having received ample opportunity to complete any GRADSO requirements. This may lead to officers being compelled to pursue job opportunities outside of the DoD while taking advantage of their recent education and job experience prior to being selected for a CSL position.

COA 1D provides best value for the Acquisition Corps in several ways. First, the realization of the benefits to the individual transfers to the enterprise through better program decision-making, aligning the development and realization of products with the strategic goals and employment of advanced capability to the warfighter. Second, the

⁴According to Brooker et al. (2015), the typical cost of an 18-month program at NPS is \$239,542. Adjusting to a 24-month program requires the addition of \$4,925 per quarter and \$11,150 to \$13,676 per month, depending on an officer's rank. Therefore the payback calculation for COA 1D is as follows: Low-cost estimate $\$239,542 + \$9850 [\$4925 \times 2] + \$66900 [\$11,150 \times 6] = \$316,292 / 6 \text{ years ADSO} = \$52,716$ and high-cost estimate $\$239,542 + \$9850 + \$82,056 [\$13,676 \times 6] = \$331,448 / 6 = \$55,242$.



increased individual and family satisfaction increases retention of qualified acquisition officers when the threat of exit is highest from industry.

1. COA 1D: NPS MBA with Acquisition and Contracting Career Field Level III DAWIA Training and Naval War College JPME Weighted Analysis

The weighted analysis of COA 1D is performed in the same manner as COAs 1A-1C against the same characteristics. This analysis is a continuation of the weighted analysis contained within the scoring section of chapter V. Table 10 provides a side by side comparison of all four COAs.

(1) Talent Management

- This COA provides training within dual career fields to meet Army and acquisition talent management goals. This enables pursuit of either career field upon graduation and postures the officer to be competitive in either career field if job experience is aligned after graduation with a 24-month degree. This allows family stabilization and improved retention incentive. COA 1D receives a talent management score of 4 due to its optimal talent achievement.

(2) Educational Value

- This COA couples the focus of DAWIA certification with the benefit of strategic studies that have relevant application to the acquisitions operating environment. COA 1D receives an educational value score of 3 due to its substantial achievement.

(3) Information Overload Value

- This COA reduces the average credit load per quarter of all other COAs. COA 1D falls below the course overload threshold throughout the entire curriculum to improve student retention and comprehension. Additionally, this COA provides a tapered curriculum to better serve individual officers as they plan to meet graduation and PCS requirements. COA 1D receives an information overload score of 3 due to its substantial achievement.

(4) Financial Benefit

- This COA achieves the lowest payback cost for the Army of all COAs. COA 1D results in a six-year ADSO incurred by each officer. COA 1D receives a score of 3 due to its substantial financial benefit achievement.



b. Score Results

The results of the weighted analysis of Table 7 is compared to COA 1D in Table 10. COA 1D significantly improves upon the value of COA 1B and presents the best value to Acquisition officers and the Army. This COA is presented as a recommendation for implementation and concludes the analysis of this study.

Table 10. Weighted Analysis of COAs 1A through 1D

Characteristic Elements of COAs	COA 1A	COA 1B	COA 1C	COA 1D	Weight
Talent Management	2	3	3	4	0.5
Educational Value	3	3	2	3	0.1
Information Loading	3	2	2	3	0.15
Financial Benefit	1	2	2	3	0.25
	2	2.6	2.5	3.5	1

2. Future Research

This report proposed the most efficient and best value course of action for an Army acquisition officer to achieve MEL-4 requirements, DAWIA mandated training, and graduate education. Follow on research should focus on determining the return on investment of available degree programs, impacts to Army contingency contracting operations, and impacts of potential curriculum changes within various NPS GSBPP programs.

It would be beneficial to empirically determine graduate education return on investment. Future researchers should conduct ROI surveys to assess the value and impact different types of graduate degree programs provide to the acquisition enterprise. These surveys should be conducted for all COAs identified, NPS specific, ACS, and TA.

Further studies should be conducted to assess the impacts of divergence in the 522 and 815 contracting courses. It would be beneficial to determine if there is a looming opportunity or threat to the workforce. While the 522 curriculum completes the requirements for level I – III contracting, the program developers decided not to apply

MN3318 contingency contracting to the course load. However, contingency contracting is a primary responsibility of Army Contracting Officers when deployed in support of combat operations. Therefore, what is the impact of not providing this course?

The GSBPP intends to adjust the curriculum plan for the 815 and 816 curriculums (R. Mortlock, email to author, October 22, 2018). The proposed adjustments will provide students greater flexibility in choosing a greater number of elective courses by reducing the number of mandatory courses (see Appendix G & H). This may have both positive and negative impacts on the results of this study. The proposed curriculum plans will likely impact DAWIA certification results as well as business acumen focus. Dr. Mortlock has also identified the potential for a 1-year resident Master of Science in Program Management (MSPM) that would be developed upon the DL curriculum currently offered. All of these intended changes result in impacts to all four characteristic elements of the COA analysis and should be studied further to understand their full value.

3. Immediate Opportunity:

This research has identified a need for a Naval War College attendance waiver. This would apply to all acquisition officers attending Naval Postgraduate School, regardless of rank and promotion potential. This recommendation can have an immediate positive impact to all NPS programs and Army acquisition personnel. Allowing all officers to attend NWC at NPS provides MEL-4 qualification at the lowest cost to the organization because there will be less moves and disruption to the officer in the future. Also, this is the most effective use of the officer's time because the education occurs concurrently with graduate education enabling the officer to earn more acquisition experience after graduation. Last of all, completing MEL-4 course work at NPS deepens the officer's understanding and application of joint operations, joint staff activities, theater security decision making and develops an ability to develop and apply strategy from historical perspectives.



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APPENDIX A. DEFENSE ACQUISITION UNIVERSITY EQUIVALENCY LISTING

Source: DAU (2018a)



DEFENSE ACQUISITION UNIVERSITY Equivalent Course Listing for DoD Schools Last Update May 8, 2018

This resource is updated within 1 business day of an approval

* The below list of equivalencies are for courses currently being delivered by DAU and/or predecessors courses which are considered acceptable towards meeting current acquisition career field certification requirements.

* To be equivalent, the providers program must have been completed on or within the approval period listed.

* If more than one provider course is listed for a single DAU course, then all provider courses must have been completed to be equivalent to the DAU course.

Organization Name	DAU Course Code	Provider Course Code <i>if Applicable</i>	Providers Course Name	Approval Period	
				Start (mn/day/yr)	End (mn/day/yr)
344th (formerly 345th) Training Squadron, Lackland AF Base	CON 100	L3ABR6C031 0C1A 6COX1	Contracting Apprentice	1/1/2005	6/1/2016
			Career Development Course	1/1/2005	6/1/2016
Air Force Command & Staff College	ACQ 101	AMC 200 (DAU)	Offered in conjunction w/ Air Force Command & Staff College	4/1/2004	5/31/2006
Air Force Institute of Technology (AFIT)	ACQ 101	FAM 101	Fundamentals of Acquisition Management	5/2/2005	9/30/2009
	ACQ 101	FAM 103	Air Force Fundamentals of Acquisition Management (AFFAM)	6/1/2005	9/24/2013
	CON 100	MRC101	Mission Ready Contracting Officer Course (MRC)	10/3/2005	9/30/2011
	CON 100	MRC102	Mission Ready Contracting Officer Course (MRC)	10/1/2011	6/19/2014
Army Acquisition Center of Excellence (AACoE) Formerly Army Logistics University (ALU) Formerly Army Logistics Management College (ALMC)	ACQ 101	AAPC	Army Acquisition Professional's Course	10/1/2017	INDEF
	ACQ 202	AAPC	Army Acquisition Professional's Course	9/30/2017	INDEF
	ACQ 203	AAPC	Army Acquisition Professional's Course	10/1/2017	INDEF
	CON 090	AAPC	Army Acquisition Professional's Course	10/1/2017	INDEF
	CON 100	AAPC	Army Acquisition Professional's Course	10/1/2017	INDEF
	CON 121	AAPC	Army Acquisition Professional's Course	10/1/2017	INDEF
	CON 124	AAPC	Army Acquisition Professional's Course	10/1/2017	INDEF
	CON 127	AAPC	Army Acquisition Professional's Course	10/1/2017	INDEF
	CON 170	AAPC	Army Acquisition Professional's Course	10/1/2017	INDEF
	CON 234	AAPC	Army Acquisition Professional's Course	10/1/2017	INDEF
	ENG 101	AAPC	Army Acquisition Professional's Course	10/1/2017	INDEF
	PMT 251	AAPC	Army Acquisition Professional's Course	10/1/2017	9/30/2018
	PMT 257	AAPC	Army Acquisition Professional's Course	10/1/2017	INDEF
	EVM 101	AAPC	Army Acquisition Professional's Course	10/1/2017	INDEF
	CON 200	AICC	Army Acquisition Intermediate Contracting Course	3/30/2012	INDEF
	CON 216	AICC	Army Acquisition Intermediate Contracting Course	10/1/2012	INDEF
	CON 270	AICC	Army Acquisition Intermediate Contracting Course	10/1/2012	INDEF
	CON 280	AICC	Army Acquisition Intermediate Contracting Course	10/1/2012	INDEF
	CON 290	AICC	Army Acquisition Intermediate Contracting Course	10/1/2012	INDEF
	ACQ 101	ALMC-QA	Army Acquisition Basic Course	1/1/2003	11/15/2011





DEFENSE ACQUISITION UNIVERSITY

Equivalent Course Listing for DoD Schools

Last Update May 8, 2018

This resource is updated within 1 business day of an approval

* The below list of equivalencies are for courses currently being delivered by DAU and/or predecessors courses which are considered acceptable towards meeting current acquisition career field certification requirements.

* To be equivalent, the providers program must have been completed on or within the approval period listed.

* If more than one provider course is listed for a single DAU course, then all provider courses must have been completed to be equivalent to the DAU course.

Organization Name	DAU Course Code	Provider Course Code <i>if Applicable</i>	Providers Course Name	Approval Period	
				Start (mn/day/yr)	End (mn/day/yr)
	CON 090	ALMC-QA	Army Acquisition Basic Course	1/3/2011	9/30/2012
	CON 100	ALMC-QA	Army Acquisition Basic Course	1/1/2003	9/30/2012
	CON 234	ALMC-QA	Army Acquisition Basic Course	1/1/2003	11/15/2009
	IRM 101	ALMC-QA	Army Acquisition Basic Course	1/1/2003	11/15/2009
	LOG 101	ALMC-QA	Army Acquisition Basic Course	1/1/2003	11/15/2009
	LOG 102	ALMC-QA	Army Acquisition Basic Course	1/1/2003	12/31/2006
	TST 102	ALMC-QA	Army Acquisition Basic Course	9/15/2008	11/15/2009
	CON 090	ABCC	Army Basic Contracting Course	10/1/2012	9/30/2017
	CON 100	ABCC	Army Basic Contracting Course	10/1/2012	9/30/2017
	CON 170	ABCC	Army Basic Contracting Course	10/1/2012	9/30/2017
	CON 234	ABCC	Army Basic Contracting Course	10/1/2012	9/30/2017
	CON 234	ALMC-ACL	Army Intermediate Contracting Laboratory	1/4/2010	9/30/2012
	ACQ 101	AAFC	Army Acquisition Foundation Course	10/1/2012	9/30/2017
	CON 121	AAFC	Army Acquisition Foundation Course	10/1/2012	9/30/2017
	CON 124	AAFC	Army Acquisition Foundation Course	10/1/2012	9/30/2017
	CON 127	AAFC	Army Acquisition Foundation Course	10/1/2012	9/30/2017
	ACQ 101	AIPM	Army Intermediate Program Management Course	1/1/2012	9/30/2012
	ACQ 201A	AIPM	Army Intermediate Program Management Course	1/4/2010	9/30/2015
	ACQ 201B	AIPM	Army Intermediate Program Management Course	1/4/2010	9/30/2015
	ACQ 202	AIPM	Army Intermediate Program Management Course	10/1/2015	9/30/2017
	ACQ 203	AIPM	Army Intermediate Program Management Course	10/1/2015	9/30/2017
	ENG 101	AIPM	Army Intermediate Program Management Course	10/1/2015	9/30/2017
	PMT 251	AIPM	Army Intermediate Program Management Course	3/18/2010	9/30/2017
	PMT 257	AIPM	Army Intermediate Program Management Course	8/22/2011	9/30/2017
	EVM 101	AIPM	Army Intermediate Program Management Course	9/1/2015	9/30/2017
	SYS 101	AIPM	Army Intermediate Program Management Course	1/3/2011	9/30/2015
	COR 222	ALMC-CL	Contracting Officer's Representative Course	6/1/2009	9/30/2015
	COR 222	Pro Dev Series	COR-Equivalent	3/12/2018	INDEF
	LOG 201	ALMC-AIL	Army Acquisition Intermediate Logistics Course	10/1/2005	12/31/2006
	LOG 235	ALMC-AIL	Army Acquisition Intermediate Logistics Course	10/1/2005	12/31/2006
	CON 100	Tlog	Theater Logistics Studies Program (Full 18 weeks)	8/6/2007	9/30/2009
	LOG 101	Tlog	Theater Logistics Studies Program (Full 18 weeks)	8/6/2007	9/30/2009

2 of 8





DEFENSE ACQUISITION UNIVERSITY **Equivalent Course Listing for DoD Schools** **Last Update May 8, 2018**

This resource is updated within 1 business day of an approval

* The below list of equivalencies are for courses currently being delivered by DAU and/or predecessors courses which are considered acceptable towards meeting current acquisition career field certification requirements.

* To be equivalent, the providers program must have been completed on or within the approval period listed.

* If more than one provider course is listed for a single DAU course, then all provider courses must have been completed to be equivalent to the DAU course.

Organization Name	DAU Course Code	Provider Course Code <i>if Applicable</i>	Providers Course Name	Approval Period	
				Start (mn/day/yr)	End (mn/day/yr)
	LOG 201	Tlog	Theater Logistics Studies Program (Full 18 weeks)	8/6/2007	9/30/2009
	ACQ 101	ALEDC	Logistics Executive Development Course (Reserve Component Configuration)	5/1/2001	12/31/2008
	CON 100	ALEDC	Logistics Executive Development Course (Reserve Component Configuration)	5/1/2001	12/31/2008
	LOG 101	ALEDC	Logistics Executive Development Course (Reserve Component Configuration)	5/1/2001	12/31/2008
	LOG 201	ALEDC	Logistics Executive Development Course (Reserve Component Configuration)	5/1/2001	12/31/2008
	ACQ 101	LEDC/ALEDC	Logistics Executive Development Course (LEDC/ALEDC) (Full 17 week version)	5/1/2001	8/5/2007
	CON 100	LEDC/ALEDC	Logistics Executive Development Course (LEDC/ALEDC) (Full 17 week version)	5/1/2001	8/5/2007
	LOG 101	LEDC/ALEDC	Logistics Executive Development Course (LEDC/ALEDC) (Full 17 week version)	5/1/2001	8/5/2007
	LOG 201	LEDC/ALEDC	Logistics Executive Development Course (Full 17 week version)	5/1/2001	8/5/2007
National Defense University, Industrial College of the Armed	PMT 401	ICAF (SAC) 5152 and 5153	Senior Acquisition Course (SAC) <i>plus the 2 electives listed below</i>	8/1/2006	INDEF
			Critical Thinking and Decision Making in Defense Acquisition I	8/1/2006	INDEF
			Critical Thinking and Decision Making in Defense Acquisition II	8/1/2006	INDEF
Naval Postgraduate School (NPS)	ACQ 101	3108 and 3392	Leadership in Product Development	10/1/2015	INDEF
	ACQ 202		Systems and Project Management	10/1/2015	INDEF
	ACQ 203				
	ACQ 101	3221	Principles of Acquisition and Program Management I	10/1/2015	INDEF
	ACQ 202	3222	Principles of Acquisition and Program Management II	10/1/2015	INDEF
	ACQ 203				
	ACQ 101	3331	Principles of Acquisition and Program Management	10/1/2015	INDEF
	ACQ 202				
	ACQ 203				
	ACQ 101	3301	Acquisition of Defense Systems	10/1/2015	INDEF
	ACQ 202				
	ACQ 203				





DEFENSE ACQUISITION UNIVERSITY **Equivalent Course Listing for DoD Schools** **Last Update May 8, 2018**

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Organization Name	DAU Course Code	Provider Course Code <i>if Applicable</i>	Providers Course Name	Approval Period	
				Start (mn/day/yr)	End (mn/day/yr)
	ACQ 265	4311	Contracting for Services	9/23/2014	INDEF
	ACQ 370	3312	Acquisition Contract Law	9/1/2014	INDEF
	BCF 103	3221 and 3222	Principles of Acquisition and Program Management I Principles of Acquisition and Program Management II	7/1/2012 7/1/2012	9/30/2018
	BCF 103	3301	Acquisition of Defense Systems	7/1/2012	9/30/2018
	BCF 103	3331	Principles of Acquisition and Program Management I	7/1/2012	9/30/2018
	CON 090	3303	Principles of Acquisition and Contract Management	10/1/2012	INDEF
	CON 100	3303	Principles of Acquisition and Contract Management	7/1/2006	INDEF
	CON 121 CON 124 CON 127	3303	Principles of Acquisition and Contract Management	1/7/2013	INDEF
	CON 121 CON 124 CON 127	3364	Business Financial & Contract Management	1/7/2013	INDEF
	CON 170	3320 and 3321	Contract Cost and Price Analysis Federal Contract Negotiations	8/1/2014 8/1/2014	INDEF INDEF
	CON 200	3315 and 4311	Acquisition Management & Contract Administration Contracting for Services	9/23/2014 9/23/2014	INDEF INDEF
	CON 216	3312	Acquisition Contract Law	10/1/2006	INDEF
	CON 234	3318	Contingency Contracting Course	10/11/2004	INDEF
	CON 270	3320 and 3321	Contract Cost and Price Analysis Federal Contract Negotiations	10/1/2014 10/1/2014	INDEF INDEF
	CON 280	3315 and 4311	Acquisition Management & Contract Administration Contracting for Services	9/23/2014 9/23/2014	INDEF INDEF
	CON 290	3315 and 3320 and 3321	Acquisition Management & Contract Administration Contract Cost and Price Analysis Federal Contract Negotiations	1/1/2015 1/1/2015 1/1/2015	INDEF INDEF INDEF
	CON 334	3318	Contingency Contracting Course	6/1/2013	INDEF





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Organization Name	DAU Course Code	Provider Course Code <i>if Applicable</i>	Providers Course Name	Approval Period	
				Start (mn/day/yr)	End (mn/day/yr)
	CON 360	4371	Acquisition Contracting Policy	9/1/2014	INDEF
	ENG 101	3100	Fundamentals of Systems Engineering	10/1/2016	INDEF
	ENG 101	3166	Principles of Advanced Systems Engineering	10/1/2016	INDEF
	ENG 101	4011	Systems Engineering for Acquisition Managers	10/1/2016	INDEF
	ENG 101	4021	Systems Engineering for Product Development	10/1/2016	INDEF
	ENG 202	3100	Fundamentals of Systems Engineering	11/15/2016	INDEF
	ENG 202	4011	Systems Engineering for Acquisition Managers	11/15/2016	INDEF
	ENG 202	4021	Systems Engineering for Product Development	11/15/2016	INDEF
	ENG 301	3400	Fundamentals of Engineering Project Management	8/1/2017	9/30/2018
	ENG 301	4009	Systems Architecture for Systems Engineering	8/1/2017	9/30/2018
	ENG 301	4012	Management of Advanced Systems Engineering	8/1/2017	9/30/2018
	ENG 301	4022	Systems Architecture for Product Development	8/1/2017	9/30/2018
	ENG 302	3400	Fundamentals of Engineering Project Management	10/1/2018	INDEF
	ENG 302	4009	Systems Architecture for Systems Engineering	10/1/2018	INDEF
	ENG 302	4012	Management of Advanced Systems Engineering	10/1/2018	INDEF
	ENG 302	4022	Systems Architecture for Product Development	10/1/2018	INDEF
	EVM 101	3221 and 3222	Principles of Acquisition and Program Management I Principles of Acquisition and Program Management II	7/1/2012 7/1/2012	INDEF
	EVM 101	3301	Acquisition of Defense Systems	7/1/2012	INDEF
	EVM 101	3331	Principles of Acquisition and Program Management I	7/1/2012	INDEF
	EVM 263	4307	Program Management Policy and Control	11/1/2015	INDEF
		4366	Program Management and Leadership	11/1/2015	INDEF
	ISA 101	3309	Acquisition of Embedded Weapon Systems Software	4/1/2017	INDEF





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Organization Name	DAU Course Code	Provider Course Code <i>if Applicable</i>	Providers Course Name	Approval Period	
				Start (mn/day/yr)	End (mn/day/yr)
	ISA 101	3361	Information Technology and Software Acquisition Management	4/1/2017	INDEF
	LOG 103	3365	Acquisition Logistics Management and Program Sustainment	10/1/2011	INDEF
	LOG 103	4450	Logistics Strategy	10/1/2011	INDEF
	LOG 103	4470	Logistics Strategy	10/1/2011	INDEF
	PMT 251	3108 and	Leadership in Product Development	6/1/2010	6/30/2018
	PMT 257	3392	Systems and Project Management	6/1/2010	INDEF
	PMT 251	3221 and	Principles of Acquisition and Program Management I	6/1/2010	6/30/2018
	PMT 257	3222	Principles of Acquisition and Program Management II	6/1/2010	INDEF
	PMT 251	3331	Principles of Acquisition and Program Management	6/1/2010	9/30/2018
	PMT 352 A & B	3361 and	Information Technology and Software Acquisition Management	10/1/2002	6/30/2019
		3362 and	Acquisition Design Verification & System Assessment	10/1/2002	6/30/2019
		3363 and	Manufacturing and Quality Management	10/1/2002	6/30/2019
		3364 and	Business Financial Contract & Management	10/1/2002	6/30/2019
		3365 and	Acquisition Logistics Management & Program Sustainment	10/1/2002	6/30/2019
		4366	Program Management & Leadership	10/1/2002	6/30/2019
	PMT 352 A & B	3303 or	Principles of Acquisition and Contract Management	10/1/2002	6/30/2019
		3371 and	Contracts Management and Administration	10/1/2002	6/30/2019
		4307 or	Program Management, Policy & Control	10/1/2002	6/30/2019
		4366 and	Program Management & Leadership	10/1/2002	6/30/2019
		3155 or	Financial Management	7/8/2002	6/30/2019
		4053 and	Financial Management	7/8/2002	6/30/2019
		4470 or	Logistics Strategy	7/8/2002	6/30/2019
		4450 and	Logistics Strategy	7/8/2002	6/30/2019
		3384 and	Principles & Concepts of Production & Quality Management in Defense Acquisition	7/8/2002	6/30/2019
		3309 and	Acquisition of Embedded Weapon System Software	7/8/2002	6/30/2019
		4602 or 4354	Test & Evaluation Management	7/8/2002	6/30/2019
	PMT 352 A & B	3303 or	Principles of Acquisition and Contract Management	10/1/2002	6/30/2019
		3371 and	Contracts Management and Administration	10/1/2002	6/30/2019

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DEFENSE ACQUISITION UNIVERSITY **Equivalent Course Listing for DoD Schools** **Last Update May 8, 2018**

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Organization Name	DAU Course Code	Provider Course Code <i>if Applicable</i>	Providers Course Name	Approval Period	
				Start (mn/day/yr)	End (mn/day/yr)
PMT 352 A & B		4307 or	Program Management, Policy & Control	10/1/2002	6/30/2019
		4366 and	Program Management & Leadership	10/1/2002	6/30/2019
		3155 and	Financial Management	10/1/2002	6/30/2019
		3309 and	Acquisition of Embedded Weapon system Software	10/1/2002	6/30/2019
		3362 and	Acquisition Design Verification & System Assessment	10/1/2002	6/30/2019
		3363 and	Manufacturing and Quality Management	10/1/2002	6/30/2019
		3365	Acquisition Logistics Management & Program Sustainment	10/1/2002	6/30/2019
		3303 or	Principles of Acquisition and Contract Management	10/1/2002	6/30/2019
		3371 and	Contracts Management and Administration	10/1/2002	6/30/2019
		4307 or	Program Management, Policy & Control	10/1/2002	6/30/2019
		4366 and	Program Management & Leadership	10/1/2002	6/30/2019
		3155 and	Financial Management	10/1/2002	6/30/2019
		4602 and	Test & Evaluation Management	10/1/2002	6/30/2019
		3361 and	Information Technology & Software Acquisition	10/1/2002	6/30/2019
		3363 and	Manufacturing and Quality Management	10/1/2002	6/30/2019
		3365	Acquisition Logistics Management & Program Sustainment	10/1/2002	6/30/2019
PQM 101 PQM 201A PQM 201B		3384	Principles & Concepts of Production & Quality Management in Defense Acquisition	3/1/1997	INDEF
SYS 202		3100	Fundamentals of Systems Engineering	1/1/2008	12/31/2018
SYS 202		3166	Principles of Systems Engineering	10/1/2008	12/31/2018
SYS 202		4011	Systems Engineering for Acquisition Managers	1/1/2008	12/31/2018
SYS 202		4021	Systems Engineering for Product Development	1/1/2008	12/31/2018
SYS 202		4007 and	Introduction to Systems Engineering	1/1/2008	12/31/2018
		4008	Systems Engineering and Integration	1/1/2008	12/31/2018
TST 204		3362	Design Verification and System Assessment	5/1/2014	INDEF
TST 204		4354	Systems Test and Evaluation	5/1/2014	INDEF
TST 204		4602	Test and Evaluation Management	5/1/2014	INDEF





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Organization Name	DAU Course Code	Provider Course Code <i>if Applicable</i>	Providers Course Name	Approval Period	
				Start (mn/day/yr)	End (mn/day/yr)
	TST 204	4603	Test and Evaluation	5/1/2014	INDEF
U.S. Navy Engineering Duty Officer School	ACQ 101	A-4N-0021	Engineer Duty Officer (EDO) Basic Course	12/21/1995	INDEF
	ACQ 202	A-4N-0021	Engineer Duty Officer (EDO) Basic Course	4/6/2015	INDEF
	ACQ 203	A-4N-0021	Engineer Duty Officer (EDO) Basic Course	4/6/2015	INDEF
U.S. Navy Test Pilot School	ACQ 101		Test Pilot School	10/1/2006	6/30/2009



APPENDIX B. LEVEL III DAWIA TRAINING REQUIREMENTS

The following information is drawn from the website of the Defense Acquisition University (2018b).

** (R): denotes resident course*

Program Management Level 1

- Acquisition Training:
 - ACQ 101
- Functional Training:
 - ENG 101, CLB 007, CLV 016
- Education:
 - Formal postsecondary education not required for certification
- Experience:
 - One year of acquisition experience with cost, schedule, and performance responsibilities

Program Management Level 2

- Acquisition Training:
 - ACQ 202 and ACQ 203(R)
- Functional Training:
 - PMT 252, PMT 257, CON 121, CON 124, CON 127, EVM 101, ISA 101
- Education:
 - Formal postsecondary education not required for certification
- Experience:
 - Two years of acquisition experience with cost, schedule, and performance responsibilities



Program Management Level 3

- Acquisition Training:
 - None required
- Functional Training:
 - ACQ 315(R), BCF 110, ENG 201, EVM 263(R), LOG 103, PMT 355, PMT 360(R)
- Education:
 - Formal postsecondary education not required for certification
- Experience:
 - Four years of acquisition experience with cost, schedule, and performance responsibilities
 - At least two years in a program office for system development and acquisition or similar organization (dedicated matrix to a PM, PEO, DCMA program integrator, or supervisor of shipbuilding). These two years may run concurrently with the preceding four-year requirement

OR

- Level 3 DAWIA certification in another acquisition functional
- Two years in program management with cost, schedule, and performance responsibilities
- At least two years in a program office for system development and acquisition or similar organization (dedicated matrix to a PM, PEO, DCMA program integrator, or supervisor of shipbuilding). These two years may run concurrently with the preceding Level 3 or two-year requirement.

Contracting Level 1

- Acquisition Training:



- None required
- Functional Training:
 - CON 090(R), CON 100, CON 121, CON 124, CON 127, CON 170(R), CLC 033, CLC 057, CLC 058, CLM 059
- Education:
 - 24 semester hours in accounting, law, business, finance, contracts, purchasing, economics, industrial management, marketing, quantitative measures, or organization and management
 - Baccalaureate Degree (any field of study)
- Experience:
 - 1 year of contracting experience

Contracting Level 2

- Acquisition Training:
 - ACQ 101
- Functional Training:
 - CON 200, CON 216, CON 270(R), CON 280(R), CON 290(R), CLC 051, CLC 056, HBS 428
- Education:
 - 24 semester hours in accounting, law, business, finance, contracts, purchasing, economics, industrial management, marketing, quantitative measures, or organization and management
 - Baccalaureate Degree (any field of study)
- Experience:
 - 2 years of contracting experience

Contracting Level 3



- Acquisition Training:
 - ACQ 202
- Functional Training:
 - CON 360(R)
 - 1 additional course from Harvard Business Management Modules
 - Elective from one of the following courses: ACQ 265(R), ACQ 315(R), ACQ 370(R), CON 244(R), CON 252(R), CON 334(R), CON 370(R)
- Education:
 - 24 semester hours in accounting, law, business, finance, contracts, purchasing, economics, industrial management, marketing, quantitative measures, or organization and management
- Baccalaureate Degree (any field of study)
- Experience:
 - 4 years of contracting experience



APPENDIX C. 815 CURRICULUM – ACQUISITION AND CONTRACT MANAGEMENT OVERVIEW

Adapted from NPS (n.d.d).



815 MBA Acquisition and Contracting Management Course Matrix Total hours: 96 lecture, 20 lab hours in 6 Quarters Average 17.6 hours per quarter

1 W/Su 13/3	GB3010 (4-0) Managing for Organizational Effectiveness	GB3050 (4-0) Financial Reporting & Analysis	GB3070 (4-0) Economics and the Global Defense Environment	GB3014 (1-0) Problem Analysis & Ethical Dilemmas	GB1000 (0-3) Quantitative Skills for Graduate Management Studies
2 F/Sp 19/1	GB4052 (3-0) Managerial Finance	GB3051 (3-0) Cost Management	GB3040 (4-0) Business Statistics & Data Analysis	GB4071 (4-0) Econ Analysis & Defense Resource Allocation	MN3331 (5-1) Principles of Sys Acqn & Program Mgmt
3 W/Su 18/0	GB3012 (3-0) Communications for Mgns	GB4053 (4-0) Defense Budget & Financial Mgmt Policy	GB4043 (3-0) Business Modeling Analysis	GB3042 (4-0) Operations Management	MN3303 (4-0) Principles of Acquisition & Contracting
4 F/Sp 20/0	GB4014 (4-0) Strategic Management	MN 3312 (4-0) Contract Law	MN3315 (4-0) Acquisition Management & Contract Admin	JPME (4-0)	JPME (4-0)
5 W/Su 13/8	GB4050 (0-6) MBA Applied Project	MN3320 (3-0) Contract Cost and Price Analysis	MN3321 (3-0) Federal Contract Negotiations	MN3318 (3-0) Contingency Contracting	JPME (4-2)
6 F/Sp 13/8	GB4050 (0-6) MBA Applied Project	MN4371 (4-0) Acquisition & Contracting Policy	MN3384 (4-0) Principles of Acq Prod & Qual Mgmt	MN4311 (3-0) Contracting for Services	JPME (2-2)



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APPENDIX D. 816 CURRICULUM - SYSTEMS ACQUISITION MANAGEMENT OVERVIEW.

Adapted from NPS (n.d.e)

					Studies
2 F/Sp 19/1	GB4052 (3-0) Managerial Finance	GB3051 (3-0) Cost Management	GB3040 (4-0) Business Statistics & Data Analysis	GB4071 (4-0) Econ Analysis & Defense Resource Allocation	MN3331 (5-1) Principles of Sys Acqn & Program Mgmt
3 W/Su 18/0	GB3012 (3-0) Communications for Mgrs	GB4053 (4-0) Defense Budget & Financial Mgmt Policy	GB4043 (3-0) Business Modeling Analysis	GB3042 (4-0) Operations Management	MN3303 (4-0) Principles of Acquisition & Contracting
4 F/Sp 19/2	GB4014 (4-0) Strategic Management	SE3100 (3-2) Systems Eng for Acq Mgrs	MN3384 (4-0) Principles of Acqn Prod & Qual Mgmt	JPME (4-0)	JPME (4-0)
5 W/Su 14/11	GB4090 (0-5) MBA Applied Project	GB4410 (4-0) Logistics Engineering	MN3309 (4-1) Acqn of Weapon Systems Software	MN4602 (2-2) Test & Eval Management	JPME (4-2)
6 F/Sp 14/8	GB4090 (0-5) MBA Applied Project	MN3315 (4-0) Acquisition Management & Contract Admin	MN4470 (4-0) Strategic Planning and Policy for The Logistic Manager	MN4307 (4-0) Prog Mgmt Policy & Control	JPME (2-2)



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APPENDIX E. CURRICULUM 522 - SYSTEMS ENGINEERING MANAGEMENT OVERVIEW

Source: NPS (n.d.g)

Curriculum 522 Systems Engineering Management – System Acquisition

Typical Course Matrix

Shaded courses meet degree requirements

Non-colored courses are extra courses requested by sponsor

QTR 1 Summer or Winter 9-1 or 17-3 w/IPME	MN3331 Principles of Sys. Acq. & Prog Mgmt (5-1)	MN3303 Principles of Acq. & Contract Mgmt (4-0)	NW3230 Strategy and War (4-2)	NW3275 Joint Maritime Operations I (4-0)	
QTR 2 Fall or Spring 14-3 or 16-5 w/IPME	SE3100 Fundamentals of Systems Engineering (3-2)	QA3411 Introduction to Human Systems Integration (3-0)	MN3384 Principles of Production and Quality Mgmt (4-1)	MN3312 Government Contracts Law (4-0)	NW3276 Joint Maritime Operations II (2-2)
QTR 3 Winter or Summer 12-2 or 16-2 w/IPME	SI3400 Engineering Project Management (3-2)	SE3011 Engineering Cost Estimation (3-0)	MN3320 Contract Cost and Price Analysis (3-0)	MN3321 Federal Contract Negotiations (3-0)	NW3285 Theater Security Decision Making (4-0)
QTR 4 Spring or Fall 16-4	SE3302 Systems Suitability (3-2)	SE4150 System Architecture and Design (3-2)	SE3811 Critical Thinking for Systems Engineering (2-0)	MN4371 Acquisition and Contracting Policy (4-0)	MN3315 Contract Administration (4-0)
QTR 5 Summer or Winter 16-4	SE3201 Engineering Systems Conceptualization (Project) (2-4)	SE4354 Test and Evaluation (4-0)	SE3812 Ethics in Systems Engineering (2-0)	GB4053 Defense Budget Policy and Financial Mgmt Systems (4-0)	MN3309 Software Acquisition Mgmt for Strategic and Tactical Systems (4-0)
QTR 6 Fall or Spring 16-4	SE3202 Engineering Systems Design (project) (2-4)	SE4xxx SE Technical Elective (3-0)	MN4307 Program Mgmt Policy and Control (4-0)	MN4470 Strategic Planning and Policy for the Logistics Mgr (4-0)	MN4311 Contracting for Services (3-0)



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APPENDIX F. 8XX MBA 24 MONTH COA COURSE MATRIX

8XX 24 month COA Course Matrix
Total hours: 116 lecture, 27 lab hours in 8 Quarters
Average 16.18 hours per quarter

1 W/Su 13/3	GB3010 (4-0) Managing for Organizational Effectiveness	GB3050 (4-0) Financial Reporting & Analysis	GB 3070 (4-0) Economics and the Global Defense Environment	GB 3014 (3-0) Problem Analysis & Ethical Dilemmas	GB1000 (0-3) Quantitative Skills for Graduate Management Studies
2 F/Sp 18/1	GB 4052 (3-0) Managerial Finance	GB 3051 (3-0) Cost Management	GB 3040 (4-0) Business Statistics & Data Analysis	GB 4071 (4-0) Econ Analysis & Defense Resource Allocation	MM3021 (0-1) Principles of Sys Acquisition & Program Management
3 W/SU 18/0	GB3012 (3-0) Communications for MGRs	GB4053 (4-0) Defense Budget & Financial Mgmt Policy	GB 4040 (3-0) Business Modeling Analysis	GB 3042 (4-0) Operations Management	MM3002 (4-0) Principles of Acquisition & Contracting Management
4 F/Sp 18/0	GB4014 (4-0) Strategic Management	MM3054 (4-0) Principles of ACQ PRC&S: Qual MMT	MM3015 (4-0) Acquisition Management & Contract Admin	MM4011 (3-0) Contracting for Services	
5 W/SU 18/5	MM 3012 (4-0) Contract Law	MM3058 (4-1) Acq of Weapon Systems Software	MM4002 (2-0) Test & Eval Management	SE 3100 (3-0) Systems Engineering for Acquisition Managers	MM3018 (3-0) Contingency Contracting
6 F/Sp 15 / 0 (incl JPME)	MM3021 (3-0) Federal Contract Negotiations	MM4070 (4-0) Strategic Planning and Policy for the Logistic Manager	MM4007 (4-0) Prog Mgmt Policy & Control	NW3285 (4-0) Threat/ Security Decision Making	
7 W/SU 11 / 8 (incl JPME)	GB4080 (3-0) MBA Applied Project	MM3275 (4-0) JMO -1	NW3230 (4-0) Stat & War	MM3220 (3-0) Contract Cost and Price Analysis	
8 F/Sp (BM10) (incl JPME)	SI4000 (3-0) Engineering Project Management	GB4080 (0-4) MBA Applied Project	NW3275 (2/2) JMO -2	MM4071 (4-0) Acquisition & Contracting Policy	



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APPENDIX G. PROPOSED 815 COURSE MATRIX

Source: Dr. Robert Mortlock, email to author, October 22, 2018.

Standard 815 Matrix

1 W/Sm	GB3010 (4-0) Managing for Organizational Effectiveness	GB40XX (X-0) Ethical Leadership in Public Organizations	MN3331 (5-1) Principles of Systems Acquisition and Program Management	MN3303 (4-0) Principles of Acquisition and Contract Management	
2 Sp/F	GB3040 (4-0) Managerial Statistics	GB30XX (4-0) Financial and Managerial Accounting	MN3312 (4-0) Government Contract Law	MN3315 (4-0) Acquisition Management and Contract Administration	
3 W/Sm	GB3042 (X-0) Process Analytics	GB30XX (X-0) Cost Benefit Analysis	MN3320 (3-0) Contract Cost and Price Analysis	MN3321 (3-0) Federal Contract Negotiations	
4 Sp/F	GB4044 (3-0) Defense-Focused Managerial Inquiry	GB4053 (4-0) Defense Budget & Financial Management	MN3318 (3-0) Contingency Contracting	Elective	
5 W/Sm	GB4090 (0-6) MBA Project	GB4014 (4-0) Strategic Management	MN4311 (3-0) Services Contracting	Elective	
6 Sp/F	GB4090 (0-6) MBA Project	MN4371 (4-0) Acquisition & Contracting Policy	Elective	Elective	



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APPENDIX H. PROPOSED 816 COURSE MATRIX

Source: Dr. Robert Mortlock, email to author, October 22, 2018

1 W/Sm	GB3010 (4-0) Managing for Organizational Effectiveness	GB40XX (X-0) Ethical Leadership in Public Organizations	MN3331 (5-1) Principles of Systems Acquisition and Program Management	MN3303 (4-0) Principles of Acquisition and Contract Management	
2 Sp/F	GB3040 (4-0) Managerial Statistics	GB30XX (4-0) Financial and Managerial Accounting	SE3100 (3-2) Systems Eng for Acq Mgrs	MN3384 (4-1) Principles of Acqn Prod & Qual Mgm	
3 W/Sm	GB3042 (X-0) Process Analytics	GB30XX (X-0) Cost Benefit Analysis	MN4602 (2-2) Test & Eval Management	MN3309 (4-1) ACQ of Weapon Systems Software	
4 Sp/F	GB4044 (3-0) Defense- Focused Managerial Inquiry	GB4053 (4-0) Defense Budget & Financial Management	GB4021 (4-0) Strategic Management of Information Technology	Elective	
5 W/Sm	GB4090 (0-6) MBA Project	GB4014 (4-0) Strategic Management	MN4999 (2-0) PMP Prep	Elective	
6 Sp/F	GB4090 (0-6) MBA Project	MN4307 (4-0) Program Mgt Policy & Control	MN4470 (4-0) Strategic Planning and Policy for The Logistics Manager	Elective	



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